GOVERNMENT OF INDIA
MINISTRY OF ENVIRONMENT, FOREST AND CLIMATE CHANGE
(IA DIVISION-INDUSTRY-3 SECTOR)
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Dated: 09.10.2023

MINUTES OF THE 66th EXPERT APPRAISAL COMMITTEE (INDUSTRY-3 SECTOR) MEETING HELD ON 13th SEPTEMBER, 2023

Venue: Ministry of Environment, Forest and Climate Change, Indira Paryavaran Bhawan, Jor Bagh Road, New Delhi-110003 through Video Conferencing (VC)

Time: 10:30 AM onwards

(i) Opening Remarks by the Chairman

Prof. (Dr.) A.B. Pandit, Chairman welcomed the Committee members and opened the EAC meeting for further deliberations.

(ii) Details of Agenda items by the Member Secretary

The Member Secretary apprised the Committee about the details of Agenda items to be discussed during this Expert Appraisal Committee (EAC) meeting.

(iii) Confirmation of Minutes of the 60th, 63rd and 65th EAC Meetings.

The EAC noted that the final minutes of the 60th, 63rd and 65th EAC meetings held on 10th August, 31st August and 14th September, 2023 respectively, were issued after incorporating the comments offered by the members and approved by the Chairman. The EAC confirmed the MoM with the following modifications (60.4, 63.7 and 65.2) based on the request of the Project Proponents (PPs).

Agenda No.60.4

Proposed Pesticide Manufacturing Unit with Production Capacity of 951 MT /month and formulation 5000 Mt/ month located at Plot No. A-4, UPSIDC Industrial Area, Kosi Kotwan Extension-2, District Mathura, Uttar Pradesh by M/s Amber Crop Science Pvt. Ltd. - Consideration of Environmental Clearance

[Proposal No. IA/UP/IND3/405545/2022; File No. IA-J-11011/316/2021-IA-II(I)]

1. The proposal was recommended by the EAC in its 60th Meeting held on 10th August, 2023, 2023 and the MoM were published on 23.8 2023. Subsequently, the Ministry observed the following modification in the title which shall be read as "**Proposed Pesticide Manufacturing Unit with Production Capacity of 951 MT /month (instead of 1050 MT/month) and formulation 5000 Mt/ month located at Plot No. A-4, UPSIDC Industrial Area, Kosi**

Kotwan Extension -2, District - Mathura, Uttar Pradesh by M/s Amber Crop Science Pvt. Ltd.

2. The EAC observed that the PP has revised the R&D production capacity from 100 MT/ month to 1 MT/month. Accordingly, the production capacity has changed from 1050 MT/month to 951 MT/month. The EAC recommended the above correction, which is of typhographical and factual in nature.

Agenda No. 63.7

Proposed Expansion of Agrochemicals, Synthetic Organic Chemicals & their Intermediates Manufacturing Plant Capacity, Captive Co-generation Power Plant(CPP) and Installation of Chlor-alkali manufacturing plant upto the production capacity of 89190.0 TPA for Products & Intermediates, 27480.0 TPA for Non-EC products (Pesticide Formulations) & 900439.2 TPA for Byproducts/Co-products, 28000 TPA for Inorganic products, CPP- 4.0 MW to 11 MW and WHRS 2.4MW to 6.4 MW located at Plot Nos. B-1/6, B-1/7, D-1/2, OS-8 & F-1/1 MIDC, Lote Parshuram, Taluka Khed, District Ratnagiri, Maharashtra by M/s Gharda Chemicals Limited - Consideration of Environmental Clearance

[Proposal No. IA/MH/IND3/434383/2023; File No. J-11011/09/2016-IA-II(I)]

1. The proposal was recommended by the EAC in its 63rd Meeting held on 31st August, 2023 and the MoM were published on 7.9.2023. Subsequently, the PP vide e-mail dated 22.9.2023 requested the following modification in the MoM:

S.no.	Reference Point no. in MOM	Detail issued in MOM which requires corrigendum	Corrected details	Justification with Reference
1	3.7.2. **Project Salient Features**, Page 103 of 310- **Detailed product capacity table- S. No. 39**	Product name- Chlorantraniliprole (Purification) End use- Herbicide	Product name- Chlorantraniliprole (Purification) End use- Insecticide	This is a typographical error at the PP end.
2	Section no. 3.7.6.1, Page no. 116 of 130, **Specific**	Effluent generation shall be 3542 KLD after expansion for unit 1,4,7. Out of	For Unit 1, 4 & 7, total wastewater generation in the existing unit is 1,526 KLD. Domestic sewage of 80 KLD	We have enhanced the paragraph for better

S.no.	Reference Point no. in MOM	Detail issued in MOM which requires corrigendum	Corrected details	Justification with Reference
	Condition no.- 5	7147 KLD, Effluent generation from scrubbing water, process High COD High TDS stream & RO reject shall be treated in MEE of capacity 3050 KLD. MEE concentrate shall be sent to ATFD in existing and the same shall be followed after expansion. MEE condensate is partially sent to ETP for further treatment, partially for reuse and the same shall be followed after proposed expansion. In existing unit, R&D lab effluent, vessel cleaning effluent, blowdown from Pilot plant boiler, steam condensate, low COD low TDS stream from process and MEE condensate are treated in ETP of capacity 1200 KLD followed by discharge of 1084 KLD to CETP and after expansion shall be treated in ETP of capacity 3780 KLD followed by partial discharge of 1500	is treated in STP and the treated water obtained is reused in gardening. Cooling tower blowdown of 221 KLD is treated in RO. RO reject is sent to MEE & RO Permeate of 177 KLD obtained is reused in cooling tower. A high concentration stream of 762 KLD including High COD-TDS process wastewater & scrubbing wastewater is treated in MEE. MEE condensate is partially sent to ETP for further treatment and rest for reuse in cooling towers and MEE concentrate is sent to ATFD. Low concentration stream of 463 KLD including R&D Lab effluent & Pilot plant, Low COD-TDS process wastewater, vessel cleaning effluent, pilot plant Boiler blowdown, steam condensate as effluent is treated in ETP. Treated water of 1084 KLD obtained from ETP is discharged to CETP. The existing capacity of wastewater treatment units is STP- 250 KLD, RO- 1340 KLD, MEE- 880 KLD & ETP- 1200 KLD. For Unit 1, 4 & 7, total wastewater generation after expansion will be 3,542 KLD. Domestic sewage of 90 KLD (85 from unit 1, 4 & 7 + 5	understanding by SPCB while granting consent. MEE capacity is 880 KLD whereas inadvertently, we had written 612 KLD, hence this correction is requested.

S.no.	Reference Point no. in MOM	Detail issued in MOM which requires corrigendum	Corrected details	Justification with Reference
		KLD to CETP & rest to be further treated in RO. In the existing unit, CT blowdown is treated in RO of capacity 1340 KLD and after expansion shall be treated along with ETP treated water in RO of capacity 2320 KLD. RO permeate is reused & RO reject is sent to MEE both in existing & after expansion. Domestic wastewater is treated in STP of 250 KLD both in existing & after expansion. 5.	KLD from unit no. 3) will be treated in STP and the treated water obtained is reused in gardening. Cooling tower blowdown of 442 KLD will be treated in RO. RO reject will be sent to MEE & RO Permeate obtained will be reused in the cooling tower. A high concentration stream of 2154 KLD including High COD-TDS process wastewater & scrubbing wastewater will be treated in MEE. MEE condensate will be partially sent to ETP for further treatment and rest for reuse in cooling towers and MEE concentrate will be sent to ATFD. Low concentration stream of 861 KLD including R&D Lab & Pilot plant effluent, Low COD-TDS process wastewater, vessel cleaning effluent & pilot plant Boiler blowdown will be treated in ETP. Treated water of 1500 KLD obtained from ETP will be discharged to CETP & 1490 KLD will be sent to RO for further treatment. After expansion the capacity of treatment units will be STP- 250 KLD, RO-2320 KLD, MEE- 3050 KLD & ETP- 3780 KLD.	

S.no.	Reference Point no. in MOM	Detail issued in MOM which requires corrigendum	Corrected details	Justification with Reference
3	Section no. 3.7.6.1, Page no. 116 of 130, **Specific Condition no.- 6**	For Unit 3 existing, total effluent generation shall be 251 KLD and after expansion it shall be increased to 515 KLD. In the existing, FGD High TDS effluent & RO Reject shall be treated in Single Effect Evaporator of capacity 30 KLD and after expansion shall be treated in Single Effect Evaporator of capacity 60 KLD. In existing, Single Effect Evaporator concentrate shall be sent to the Nutsche filter & Single Effect Evaporator condensate is reused and the same shall be followed after expansion. In existing, Cogen boiler blowdown & CT blowdown is treated in ETP of capacity 300 KLD and after expansion will be treated in ETP of capacity 504 KLD. ETP treated water is further treated in RO of 240 KLD capacity and after expansion in	For Unit 3, total wastewater generation in the existing unit is 251. Domestic wastewater of 4 KLD is currently treated in a septic tank followed by a soak pit. FGD High TDS effluent of 6 KLD is treated in Single Effect Evaporator. Single Effect Evaporator concentrate is sent to the Nutsche filter & Single Effect Evaporator condensate is reused in the Cooling Tower. Waste water of 241 KLD from Cogen boiler blowdown & Cooling Tower blowdown is treated in ETP. ETP treated water is further treated in RO & RO permeate is reused in Cooling Tower & RO reject is sent to Single Effect Evaporator. The existing capacity of wastewater treatment units is Single Effect Evaporator- 30 KLD, ETP- 300 KLD & RO- 240 KLD. For Unit 3, total wastewater generation after expansion will be 515 KLD. Domestic wastewater of 5 KLD will be treated in STP of unit 1, 4 & 7. FGD High TDS effluent of 6 KLD will be treated in Single Effect Evaporator. Single Effect Evaporator concentrate will be sent to the Nutsche filter & Single Effect Evaporator condensate is	We have enhanced the paragraph for better understanding by SPCB while granting consent. ETP capacity after expansion shall be 520 KLD, however, MoM mentioned 504 KLD which is requested for change.

S.no.	Reference Point no. in MOM	Detail issued in MOM which requires corrigendum	Corrected details	Justification with Reference
		RO of 600 KLD capacity. RO permeate is reused & RO reject shall be sent to Single Effect Evaporator both in existing & after expansion. Domestic wastewater shall be treated within STP of Unit 1 and 4.	reused in the cooling tower. Waste water of 504 KLD generated from Cogen boiler blowdown & Cooling Tower blowdown will be treated in ETP. ETP treated water will be further treated in RO, RO permeate will be reused in cooling towers & RO reject will be sent to Single Effect Evaporator for further treatment. After expansion the capacity of treatment units will be Single Effect Evaporator- 60 KLD, ETP-520 KLD & RO- 600 KLD.	
4	Section no. 3.7.6.1, Page no. 116 of 130, **Specific Condition no.- 8**	As proposed, agro-briquettes shall be used as a primary fuel in the boiler and coal shall be used as a secondary fuel during the unavailability of agro briquettes. The phasing out of coal as a secondary fuel shall also be explored.	As proposed, agro-briquettes shall be blended with coal upto 15% as per availability, for use as a fuel in the boilers of CPP and that natural gas shall be used as primary fuel in existing 40 TPH boiler as & when it is available and based on techno commercial viability.	As asked by the EAC an undertaking regarding the fuel usage was submitted during post-submittals dated on 02.09.23 and accordingly fuel was also revised in the brief summary (Point 14) submitted dated 05.09.23.

2. The EAC deliberated on the requested modifications and recommended the same.

Agenda No. 65.2

Proposal for Manufacturing Synthetic Organic Chemicals with production capacity of 46 MT/Month located at Plot No. 124/29 A, GIDC, Nandesari, District. Vadodara by M/s. Mercury Organics -Consideration of Environmental Clearance

[Proposal No. IA/GJ /IND3/440009/2023; File No. JJ-11011/104/2009-IA-II(I)]

1. The proposal was recommended by the EAC in its 65th Meeting held on 14th September, 2023 and the MoM were published on 21.9.2023. Subsequently, the PP requested the following modification in the MoM:

Point No. of EAC Recommendation	**Required Additional conditions by the PP**	**Remarks**
Page no. 24 of the MOM In the hazardous waste matrix Sr. No. 9- Scrubber Solution HCl is 43 MT/Annum	In the hazardous waste matrix Sr. No. 9- Scrubber Solution HCl is 432 MT/Annum	The revised quantity was mentioned in the revised Brief summary submitted by the PP to the EAC.

2. The EAC deliberated on the above and recommended the same.

Agenda No. 66.1

Proposed Manufacturing unit of Synthetic Ester, General Plasticizers, Specialty Plasticizers, Fire Retardant Plasticizers and Lubricants and Lubricating oil with total Production capacity of 61,320 MTPA and by- products - 1,392 MTPA located at Gate no. 20/2, of MIDC, Biloshi, Palghar, Maharashtra by M/s. Witmans Industries Pvt. Ltd. - Consideration of Environmental Clearance

[Proposal No. IA/MH/IND3/425874/2023; File No. IA-J-11011/284/2021-IA-II(I)

1. The proposal is for Environmental Clearance for the Proposed Manufacturing unit of Synthetic Ester, General Plasticizers, Specialty Plasticizers, Fire Retardant Plasticizers and Lubricants and Lubricating oil with total Production capacity of 61,320 MTPA and by-products - 1,392 MTPA located at Gate no. 20/2, of MIDC, Biloshi, Palghar, Maharashtra by M/s. Witmans Industries Pvt. Ltd.

2. The project/activity is covered under Category 'A' of Item 5(f) **Synthetic Organic Chemicals (excluding formulations**) of Schedule of EIA Notification, 2006 (as amended) as the project is located outside the notified industrial area.

3. The Standard ToR was issued by the Ministry vide letter No IA-J-11011/284/2021-IA-II(I) dated 15.8.2021. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh EC case.** The proposal is placed in this 66th EAC meeting on 26th September, 2023 wherein the PP along with accredited Consultant, M/s. Enviro Analysts & Engg. Pvt. Ltd. (NABET Accreditation No: NABET/EIA/2124/SA0193 valid till June 18, 2024) made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the total land area available for proposed Greenfield project is 34,400 m^2 and no R& R is involved in the Project. The details of products and capacity are as follows:

S. no	Name of the Product	CAS No.	Use	Max. Production (TPA)
A Synthetic Esters			-Synthetic Base Oil -Lubricity Additive -Emollients for cosmetic formulations -Emulsifiers for shampoo, printing press and paints	**6600**
1.	2 Ethyl Hexyl Cocoate	92044-87-6		
2.	PEG 400 Mono Cocoate	61791-29-5		
3.	PEG 600 Mono Cocoate	61791-29-5		
4.	Neo Pentyl Glycol Dicocoate	68038-32-4		
5.	Trimethylolpropane Tricocoate	85566-29-6		
6.	PEG-400 Mono Laurate	9004-81-3		
7.	LA 15 Mole Laurate	106-33-2		
8.	Glycerine 20 Mole Laurate	55191-43-0		
9.	2 Ethyl Hexyl Laurate	20292-08-4		
10.	2 Ethyl Hexyl Oleate	26399-02-0		
11.	Butyl Oleate	142-77-8		
12.	Methoxy Glycol Oleate	67762-38-3		
13.	PEG-200 Mono Oleate	9004-96-0		
14.	PEG -400 Mono Oleate	9004-96-0		
15.	PEG 600 Mono Oleate	9004-96-0		
16.	Penta Erythriatol Mono Oleate	0332-32-8.		
17.	PEG -400 Dioleate	9005-07-6		
18.	PEG 600 Dioleate	9005-07-6	Cohesive, agents for spin finishes Used in polishes and waxes, used	
19.	NPG Dioleate	42222-50-4		
20.	Propylene Glycol Dioleate	105-62-4		
21.	Trimethylol Propane	57675-44-2		

S. no	Name of the Product	CAS No.	Use	Max. Production (TPA)
	Trioleate		in adhesive and sealants, pigments wetting agent	
22.	Pentaerythritol Tetra Oleate	19321-40-5		
23.	2 Ethyl Hexyl Palmitates	29806-73-3		
24.	Butyl Stearate	123-95-5		
25.	Peg 600 Mono Sterate	106-11-6		
26.	Iso Tri Decyl Sterate	31565-37-4		
27.	2 Ethylhexyl Stearate	22047-49-0		
28.	Peg 400 Adipate	25322-68-3		
29.	Di Iso Tridecyl Adipate	26401-35-4		
30.	Pentaerythritol Tetra 2-Ethylhexanoate	7299-99-2		
31.	Mono Ethanol Oleio Amide	26027-37-2		
32.	N-N Diethanol Oleo Amide	93-83-4		
33.	Polyricin Oleate Resin (1200)	29894-35-7.		
34.	Poly Diethylene Glycol Resin	111-46-6		
35.	Sulpho Ethoxy Phosphate Ester	68511-37-5.		
36.	Fatty Acid Polyol Ester	135800-37-2		
B General Plasticizers				**22800**
1.	Di Octyl Terpthalate	6422-86-2	- Used in Cold Resistant Agricultural Plastic film packing membrane for freezing food - Very High plasticizing with good softness and excellent lubricity. - It has also got vast application into doors, car	
2.	Di Octyl Pthalate	84-66-2		
3.	Di Isononyl Pthalate	27554-26-3		
4.	Mix Aromatic Polyglyceride	100-51-6		
5.	Mix Fatty Acid Glycerides	67701-26-2		
6.	Di Octyl Adipate	123-79-5		
7.	Cyclohexane 1, 2 Di Isononyl Carboxylate	66412-78-8		
8.	Di Ethylene Glycol Dibenzoate	120-55-8		
9.	Polyethylene Glycol Dibenzoate	9004-86-8		
10.	Di Propylene Glycol Di Benzoate (Dpgdb)	27138-31-4		
11.	Tri Isooctyl Trimeliatate	27251-75-8		

S. no	Name of the Product	CAS No.	Use	Max. Production (TPA)
12.	Polymeric Adipic Ester	28301-90-8	and ship PVE profile, soft board, foam board and fibers and Non-woven fabrics in textiles and so on.	
13.	Di Iso Nonyl Terephthalate	59802-05-0		
14.	Witplast 115			
15.	Witplast 160	--		
C Specialty Plasticizers				
1.	Di Butoxy Ethoxy Ethyl Adipate	141-17-3	Provides maximum low temperature flexibility to various types of Elastomers - Pthalate free plasticizer - Impart good mechanical properties even at elevated temperature.	**720**
2.	Dibutoxy Triglycol Adipate	141-18-4		
3.	Butyl Carbitol Formal	143-29-3		
4.	Di Octyl Sebacate	122-62-3		
5.	Xylene Formaldehyde Resin (Xf) / Vulkanol Fh	26139-75-3		
6.	PEG 300 2 Ethyl Hexanoate	9004-93-7;		
7.	Alkyl Sulphonic Phenyl Ester	91082-17-6		
D Fire Retardant Plasticizers				
1.	Tri Butyl Phosphate	126-73-8	Used as fire retardant in plasticizer	**1200**
2.	Tri Cresyl Phosphate	78-30-8		
3.	Tri Phenyl Phosphate	115-86-6		
4.	Iso Propyl Diphenyl Phosphate	60763-39-5		
5.	2 Ethyl Hexyl Diphenyl Phosphate	1241-94-7		
6.	Iso Decyl Diphenyl Phosphate	29761-21-5		
E. Lubricants and Lubricating Oil				
1.	Antistatic Oil and Industrial Lubricants	--		18000
2.	Paraffin Oil	8012-95-1		6000
3.	Polished Oil	--		6000
				30000
Total Production Capacity (A+B+C+D+E)				**61,320**

S. no	Name of the Product	CAS No.	Use	Max. Production (TPA)
F. Name of the Byproducts				**Max .Production TPA**
1.	Recovered Xylene	1330-20-7.		98
2.	30% HCl	7647-01-0		1294
	Total (Byproducts)			**1,392**

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.

6. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Vaitarna and River Tansa flows at a distance of 6.4 km NW and 8.6 km SSE respectively. There is no forest land involved in the proposed project. No Schedule-I species were observed in the 10 km radius from the proposed project.

7. The PP reported that the **Ambient air quality** monitoring was carried out at 8 locations during December 2020 to February 2021 and the baseline data indicates the ranges of concentrations as: PM_{10} (13.95 -61.67 mg/m^3), $PM_{2.5}$ (6.20 - 51.30 mg/m^3), SO_2 (4.99 – 25.11 mg/m^3) and NO_2 (8.24 -38.99 mg/m^3). AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed project would be 1.06 mg/m^3, 37.02 mg/m^3 and 30.68 mg/m^3 with respect to PM_{10}, SOx and NO_x. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise-** Noise levels are within the prescribed limit.

8. **Ground Water** The quality of ground water shows that the pH for the ground water sample ranged from 6.78 to 7.5 indicating slightly alkaline in nature. The TDS were found to be in the range 254 mg/l – 262 mg/l which is found within the acceptable limit 500 mg/l. Total Hardness of ground water samples in the study area was found to be 132.41 mg/l – 152.17 mg/l which is within the acceptable limit. Alkalinity indicates better buffering capacity of water and range between 62.81 to 77.89 mg/l. Fluoride content varies from 0.17 to 0.26 mg/l which is within the acceptable limit. Concentration level of heavy metals was found to be less in all water samples. The overall ground water quality in the study area was found to be mineralized with respect to total dissolve solids, Chlorides, sulphates and hardness. However, level of heavy metals was found to be less. The Microbial analysis results of ground water samples has reveeled that there is no sign of fecal contamination and the water is fit for human consumption as per IS 10500-2012**.** **Surface water**- The quality of Surface water (SW1-SW8) shows that most of the parameters are well within the prescribed limit as per IS 2296. Comparing the values of pH, DO, BOD and Total Coliforms with 'Use based classification of surface waters'

published by Central Pollution Control Board; it can be seen that the analyzed surface waters is slightly polluted and classified as "Class 'C'" and can be use for use for Drinking water source after conventional treatment and disinfection.

9. **Soil quality monitoring** – The collected soil samples were analyzed for various chemical parameters, viz. pH, electrical conductivity, Chloride, sulphate, potassium and phosphate the same is presented in tabular form, pH is an important parameter indicative of the alkaline or acidic nature of the soil. It greatly affects the microbial population as well as the solubility of metal ions and regulates nutrient availability. Variation in pH of soil within the study area is presented in table and it was observed that the soils are moderately acidic in nature as their pH is in between 7.28-8.16.

10. The PP reported that the total water requirement is 226 m^3/day of which fresh water requirement of 121m^3/day will be met from ground water and the balance 105 m^3/day is recycled water. Effluent of 39 m^3/d quantity will be treated through ETP of capacity 45 m^3/day. Domestic Wastewater of 13 m^3/day will be trrated in STP of capacity 15 m^3/day. The plant will be based on Zero Liquid discharge system.

11. The Power requirement after expansion will be 500 kVA MSEDCL. DG sets of capacity 250 kVA will be used as standby during power failure. Stack (height) will be provided as per CPCB norms to the proposed DG sets.

12. 2TPH x 2 Nos. LSHSD fired boiler will be installed. Multi cyclone separator/ bag filter with a stack of height of 30 m will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3 for the proposed boilers.

13. **Details of Process Emissions Generation and its Management:** HCL Scrubber shall be provided.

14. **Details of Solid Waste / Hazardous Waste Generation and its Management:** Non-Hazardous Solid Waste

S. No.	**Waste**	**Quantity**	**Disposal**
1.	Dry Garbage	16 kg/d	Hand over to authorized recyclers
2.	Wet Garbage	11 kg/d	Vermi Composting
3.	Paper waste	40 kg/d	Handover to authorized recyclers
4.	Engineering waste (i.e. Scrap, Pump seals, damage valves etc.)	60 kg/d	Handover to authorized recyclers
5.	Waste cotton rags	100 kg/month	Re-use or sell to scrap vendors

HAZARDOUS WASTE

Cat.	Type of Waste	Qty.	Method of Disposal
35.3 Sch – I	ETP Sludge	90 kg/d	Sent to CHWTSDF
5.1 Sch – I	Used Lubricants	100 kg / month	Authorized recyclers
33.1 Sch – I	Used Containers (Metal & Plastic)	1000 Nos./month	Decontamination & Re- use or sell to Scrap vendors
37.3 Sch – I	MEE Residue High boiling Organic residue Inorganic residue	2T/d 2T/d	Sent to CHWTSDF
28.1 Sch – I	Process (distillation)Residue	50 kg/d process waste	Sent to CHWTSDF
36.2 Sch-I	Spent Carbon	30 kg/d	Sent to CHWTSDF
	Spent Clay	570 kg/d	Sent to CHWTSDF
	Glass/ PPE waste	50 Kg/d	Handover to CHWTSDF

15. The Budget earmarked towards the Environment Management Plan (EMP) is ₹ 1.5 Crores (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 0.4 crores per annum. Industry proposes to allocate Rs. 0.96 Crores towards Corporate Social Responsibility.

16. Industry will develop greenbelt over an area of 33 % i.e., 10,993 m^2 out of 33,278 m^2 total net plot area available.

17. The PP reported that the Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 11.10.2022 which was presided by the District Magistrate. The main issues raised during the public hearing are related to pollution control equipment and employment generation.

Sr. No.	Issue raised	Response/Commitment from Project Proponent	Time Line	Budget Provision
1.	Implementation of STP, no sewage should be untreated.	Sewage will be treated in full-fledged STP and the treated water shall be used 100% with in the premises. Conditions of the consent to Operate shall be monitored stringently by MPCB	From January 2024 - before start of operation	Capital: 90.00 Lakhs Recurring: 10 Lakh/annum
2.	Employment	About 100 people will	Phase wise from	--

Sr. No.	Issue raised	Response/Commitment from Project Proponent	Time Line	Budget Provision
	opportunities to be generated	get the job opportunities.	March 2024	
3.	Regarding water pollution and is mitigation	Sources of water pollution could be Sewage from domestic activities, Effluent from process operations. Mitigation measures will be STP for Sewage, ETP followed by MEE. 100% recycle of treated wastewater.	From January 2024 - before start of operation.	Capital: 90 Lacs Recurring: 10 Lakh/annum
4.	Suggested to explain in simple language what is Plasticizer?	Explained, plasticizer is a softening agent which is used for softening plastic or rubber.	--	--
5.	• Chemicals to be used in manufacturing process. • Mitigation for accidental spillage • Management of Hazardous Solid waste generated • EMP should be explained properly to the local persons	• Mainly alcohol and vegetable based fatty acids shall be used. • Dyked area shall be designed around the storage area. Hence no contamination of soil or water is expected. The chemical used are water insoluble. • Hazardous waste shall be handed over to CHWTSDF for further treatment and disposal. • EMP was explained.	-- From January 2024 - before start of operation Upon start of operation --	-- Included in Project Cost Capital: 15 Lacs Recurring: 10 Lakh/annum

Sr. No.	Issue raised	Response/Commitment from Project Proponent	Time Line	Budget Provision
6.	FO should be replaced with the cleaner fuel.	Already revisited and proposed LSHS as the fuel instead of FO.	--	--
7.	Explain the water balance and reuse of treated wastewater and purpose of MEE.	The effluent and sewage generated from the project shall be treated fully and will be reused for gardening entirely. Process effluent will be sent to MEE+ATFD and will be used for cooling tower. Residue shall be sent to CHWTSDF.	From January 2024 - before start of operation	Capital: 90 Lacs Recurring: 10 Lakh/annum
8.	Fuel used for boiler	LSHS fired boiler with the capacity 1TPH shall be used for the project. Stack height 30m for boiler with dia 250m. Stack height of DG set shall be 12 m and 12m for H_2S scrubber.	From January 2024 - before start of operation	Capital: 10 Lacs Recurring: 5 Lakh/annum

18. The PP proposed to set up an Environment Management Cell (EMC) by engaging Technical Director—M works- QA Head- Engineering Head- EHS Manager – HR/Commercial- QC Manager- Production Manager- Maintenance Engineer- Safety officer- ETPI/C- QC chemist- Production chemist- trained fire fighters- ETP chemist- QC technician- Production technician- First aid technician- ETP technician for the functioning of EMC.

19. The PP reported that reported that for various conditions the Carbon sequestration are as:

Sr. No.	Scope	Emissions in tCO_2e/year	Percent Share
1	Scope 1	56.71	1%
2	Scope 2	2449.44	29%
3	Scope 3	5805.73	70%
4	Total Saving due the carbon sequestration and solar PV	109.85	-

5	Saving due to Solar heating instead of Steam Coal	87.15	
6	Total in Scope 1 and Scope 2 after reduction	2309.15	-
7	**Percentage of Saving in Scope 1 and Scope 2**		**7.86%**

20. The PP submitted the Disaster Management Plan and On-site and Off-site Emergency Plans in the EIA report.

21. The estimated project cost is Rs. 48 Crores. Total Employment will be 40 persons as direct & 60 persons indirect

22. **Deliberations by the EAC:**

The EAC, constituted under the provisions of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the Project Proponent.

The EAC noted that the Project Proponent has given an undertaking to the effect that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the project proponent.

The EAC noted that the EIA reports are in compliance with the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the Greenbelt development plan along with layout and budget, inclusion of Water body in the project layout, carbon footprint, ETP Flow chart, process details and quality of discharge standards, scrubber along with its efficiency to be achieved and advised the PP to submit the following:

- Revised action plan for greenbelt development with its layout and budget.
- Permission for inclusion of waterbody in the project layout from local authority or possibility of exclusion of the same from the project area.
- Revised Carbon footprint
- ETP flow chart, process details and quality of treated effluent.
- Details of the scrubber along with its efficiency.

The PP submitted the above information/documents and the EAC found these to be satisfactory.

The EAC deliberated the Onsite and Offsite Emergency plan and various mitigation measures to be proposed during implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Expert Members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that recommendation of EAC and grant of environmental clearance by regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The project proponent shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

23. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I**: -

(i) **The PP shall not disturb and contaminate the waterbody, part of which falls within the project area. Further, this water body and the nearby waterbodies shall be conserved and managed in consulation with the local administration as part of CER.**

(ii) The PP shall develop Greenbelt over an area at least 33%, preferably within one year of grant of EC. The 3025 number of saplings selected for the plantation shall be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions and shall also engage Technical Director—M works- QA Head- Engineering Head- EHS Manager – HR/Commercial- QC Manager- Production Manager-

Maintenance Engineer- Safety officer- ETPI/C- QC chemist- Production chemist- trained fire fighters- ETP chemist- QC technician- Production technician- First aid technician- ETP technician. In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP is ₹ 175 Lakhs (Capital cost) and ₹ 42.5 Lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(v) The total water requirement shall not exceed 226m^3/day of which fresh water requirement of 121m^3/day shall be met from ground water, rest 105 m^3/day water shall be recycled water. The PP shall ensure that water supply should not be above the permissible limit as mentioned in the letter and fresh water shall be withdrawn only after obtaining requisite permission from the Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(vi) Industrial effluent of 39 m^3/day quantity shall be treated through ETP of capacity 45 $m^{3/}$day. Domestic effluent of 13 m^3/day shall be trrated in STP of capacity 15m^3/day. The plant shall be based on Zero Liquid discharge system.

(vii) As proposed, LSHSD shall be used as a primary fuel in the boiler and Diesel shall be used as a secondary fuel during the unavailability of LSHSD.

(viii) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(ix) The project proponent shall comply with the environment norms for synthetic organic chemical as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 608 (E), dated 21. 7.2010 under the provisions of the Environment (Protection) Rules, 1986.

(x) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xi) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xii) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xiii) The project proponent shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(xiv) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xv) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xvi) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xvii) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xviii) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xix) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be fire proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xx) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for

various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxi) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xxii) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 66.2

Proposed Expansion of Dyes and Dye Intermediate Manufacturing Unit with production capacity from 2640 TPA to 4980 TPA located at new survey no. 145 and 146 (old survey no. 92, Block no. 86), new survey no. 143 and 144 (Old Block no. 85/1 and 85/2), Dhanot, Taluka Kalol, District Gandhinagar, Gujarat by M/s. Gopinath Chemtech Ltd. (Unit-II) – Consideration of ToR

[Proposal No. IA/GJ/IND3/440862/2023; File No. J-11011/265/2009-IA II (I)]

The PP vide email dated 23.9.2023 informed that they want to change the production capacity and shall reapply. Therefore, it was requested to delist the proposal.

The proposal was accordingly returned to the PP in the present form.

Agenda No.66.3

Expansion of Synthetic Organic Chemicals in existing unit with production capacity from 2972.40 TPA to 27600 TPA located at Plot No: 193/1, Phase-II, GIDC Estate, Vapi, Taluka Pardi, District: Valsad, Gujarat by M/s. Apex Pharmachem Private Limited- Consideration of ToR

[Proposal No. IA/GJ/IND3/442832/2023; File No. J-11011/498/2008-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Expansion of Synthetic Organic Chemicals in existing unit with production capacity from 2972.40 TPA to 27600 TPA located at Plot No: 193/1, Phase-II, GIDC Estate, Vapi, Taluka Pardi, District: Valsad, Gujarat by M/s. Apex Pharmachem Private Limited. **The PP reported that the project is located in a Critically Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'B' of Item 5(f) Synthetic, Organic Chemicals'

of the schedule to the EIA Notification, 2006. However, since the project site is located within a **Critically Polluted Area,** the project attracts the general condition therefore, considered as Category 'A' at Centre.

3. The PP applied for the ToR vide proposal number No. **IA/GJ/IND3/442832/2023** dated 6.9.2023. The proposal is now placed in the 66th EAC meeting held on 26th September, 2023, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the product details are as follows:

LIST OF EXISTING PRODUCTS

Sr.No.	List of Products	Cas No.	Quantity (MT/Annum)	End Use
Group-A				
1	2-Chloro 5-Chloro Methyl Thiazole	105827-91-6	120	Pharma/Synthetic intermediate
2	Sodium thiosulfate	7772-98-7	717.6	Kettle feed
Group-B				
3	(EBASA) Ethyl Benzene Aniline Meta Sulphonic Acid	101-11-1	1200	Dyes and pigment
4	(PCOSA) Para Cresidine Ortho Sulphonic Acid	6471-78-9		Dyes and pigment
5	(PNTOSA) Para Nitro Tolyl Ortho Sulphonic Acid	121-03-9		Dyes and pigment
6	(PNCBOSA) Para Nitro Chloro Benzene ortho Sulphonic Acid	946-30-5		Dyes and pigment
7	(ONCBPSA) Ortho Nitro Chloro Benzene Para Sulphonic Acid	121-18-6		Dyes and pigment
8	(OPDASA) Ortho Phenydine Diamine Sulphonic Acid	-		Dyes and pigment
Group-C				
9	(Guaiacol)2-Methoxy Phenol	90-05-1	600	Antioxidants for food color
10	(ONA)Ortho Nitro Anisole	91-23-6		Pharma
11	(OCA/OCA HCL) Para Chloro Aniline/Ortho Chloro Aniline hydrochloride	106-47-8/ 20265-96-7		Pharma
12	(PCD) Para Cresidine	120-71-8		Food color
13	6 bromo 2,3,4 trifluoro aniline	122375-82-0		Pharma/Synthetic intermediate

14	4 Nitro n-methylpthalamide	41663-84-7		Polymer
Group-D				
15	2-Diazo 1-naphthol 5-sulphonic acid sodium salt	2657-00-3	300	Electronic chemical
16	3 4 5 Tri-fluorobromobenzene	138526-69-9		Pharma/Synthetic intermediate
17	Veratrole	91-16-7	34.8	Pharma
	Total (MT/Annum)		**2972.4**	

TOTAL PROPOSED AFTER EXPANSION:

Sr. No.	List of Products	CAS No.	Qunatity (MT/Annum)	End Use
A	**Diazotization Intermediates**			
1	2,4,5-Trifluorobromobenzene	327-52-6	2400	Pharma/Synthetic intermediate
2	3,4,5-Trifluorobromobenzene	138526-69-9		Pharma/Synthetic intermediate
3	1,3,5-Tribromobenzene	626-39-1		Chemical Intermediate
4	1,3,5-Trichlorobenzene	108-70-3		Chemical Intermediate
5	o-Fluorophenol	367-12-4		Pharma Intermediate
6	p-Fluorophenol	371-41-5		Pharma Intermediate
7	m-Chlorotoluene	108-41-8		Speciality Chemical And Veterinary Drugs
8	m-Cresol	108-39-4		Pharma Intermediate
9	2-Diazo-1-naphthol 5-sulphonic acid sodium salt	2657-00-3		Electronic chemical
10	2,3-Dichlorophenol	576-24-9		Intermediates in the manufacture of more complex chemical compounds. It will be used as RM for chemical intermediate
11	2,5-Dichlorophenol	583-78-8		
12	3,4-Dichlorophenol	95-77-2		
13	3,5-Dichlorophenol	591-35-5		
14	2,3-Xylenol	526-75-0		Speciality Intermediate
15	2,4-Xylenol	105-67-9		Speciality Intermediate
16	2,5-Xylenol	95-87-4		Speciality Intermediate
17	m-Fluorotoluene	352-70-5		Pharma Intermediate
18	p-Fluorotoluene	352-32-9		Pharma Intermediate
19	Fluorobenzene	462-06-6		Pharma Intermediate

20	2-Chloro-4-fluorotoluene	452-73-3		Pharma Intermediate
21	2-Chloro-6-fluorotoluene	443-83-4		Pharma Intermediate
22	Benzotriazole	95-14-7		Rubber/Lubricants
23	Tolytriazole	29385-43-1		Rubber/Lubricants
24	2,3,5,6-Tetrachloropyridine	2402-79-1		Pharma/Synthetic intermediate
25	3,5-Dichlorobromobenzene	19752-55-7		Fine Chemical
26	p-Bromotoluene	106-38-7		Speciality Chemical
27	3-Bromobenzotrifluoride	401-78-5		Pharma/Synthetic intermediate
28	2-Nitro-p-cresol	119-33-5		Pigment Intermediate
29	2,4-Dichlorophenylhydrazine	5446-18-4		Pharma Intermediate
30	3-Hydroxyacetophenone	121-71-1		Fine Chemical
31	5-Nitro-o-cresol	5428-54-6		Pigment Intermediate
32	Phenylhydrazine	100-63-0		Pharma Intermediate
33	3-Bromopyridine	626-55-1		Pharma/Synthetic intermediate
	Maximum Group-A		**2400.00**	
B	**Nitration Intermediates**			
1	4-Nitrophthalimide	89-40-7	7200	Pharma Intermediate
2	N-Methyl-4-nitrophthalimide	41663-84-7		Polymer
3	2,4-Dichloro-3-fluoronitrobenzene (DCFNB) and isomer	393-79-3/3107-19-5		Pharma Intermediate
4	3-Nitrobenzotrifluoride	98-46-4		Pharma Intermediate
5	2-Nitro-p-cresol	119-33-5		Pigment Intermediate
6	2,4-Dichloro-5-fluoronitrobenzene	2105-59-1		Pharma/Synthetic intermediate
7	2,4-Dichloro-6-Nitrophenol	609-89-2		Feed intermediate
8	2-Chloro-4-fluoro-5-nitrobenzoic acid	114776-15-7		Pharma Intermediate
	Maximum Group-B		**7200.00**	
C	**Hydrogenation Intermediates**			
1	24/35/26-Difluoroaniline	367-25-9/372-39-4/5509-65-9	2400	Pharma Intermediate
2	1,3-Difluorobenzene	372-18-9		Pharma Intermediate
3	o-Fluoroaniline	**348-54-9**		Pharma Intermediate
4	p-Fluoroaniline	**371-40-4**		Pharma Intermediate

5	p-Cresidine-Hydrogenation	120-71-8		Food Colour
6	2,3,4-Triflouroaniline	3862-73-5		Pharma Intermediate
7	3-Aminobenzotrifluoride	98-16-8		Pharma Intermediate
8	p-Aminobenzamide	2835-68-9		Pharma Intermediate
	Maximum Group-C		**2400.00**	
D	**Chlorination Intermediates**			
1	Chloranil	118-75-2	1200	Pigment Intermediate
2	2,4,6-Trichlorophenol	86-06-2		Wood and glue preservative
3	p-Nitrobenzoyl chloride	122-04-3		Pharma Intermediate
4	m-Chlorobenzyl chloride (MCBC)	620-20-2		Pharma Intermediate
5	m-Chlorobenzyl dichloride (MCBDC)	15145-69-4		Pharma Intermediate
6	m-Chlorobenzotrichloride (MCBTC)	2136-81-4		Pharma Intermediate
7	p-Chlorobenzyl chloride (PCBC)	104-83-6		Pharma Intermediate
8	p-Chlorobenzyl dichloride (PCBDC)	13940-94-8		Pharma Intermediate
9	p-Chlorobenzotrichloride (PCBTC)	5216-25-1		Pharma Intermediate
10	o-Chlorobenzyl chloride (OCBC)	611-19-8		Cosmetics additives and Pharma intermediate
11	o-Chlorobenzyl dichloride (OCBDC)	88-66-4		Pharma Intermediate
12	o-Chlorobenzotrichloride (OCBTC)	2136-89-2		Pharma Intermediate
13	Benzoyl chloride (BoC)	98-88-4		Pharma Intermediate
14	p-Chlorobenzoyl chloride (PCBoC)	122-01-0		Pharma Intermediate
15	p-Fluorobenzoyl chloride (PFBoC)	403-43-0		Pharma Intermediate
	Maximum Group-D		**1200.00**	
E	**Bromination Intermediates**			
1	4-Bromo-2,5-dichlorophenol	1940-42-7	1200	Pharma/Synthetic intermediate
2	4-Bromomethyl-2-cynobiphenyl (Bromo OTBN)	114772-54-2		Pharma Intermediate
3	2,4,6-Tribromoaniline	147-82-0		speciality chemical
4	4-Bromoanisole	104-92-7		Chemical intermediate
5	6-Bromo-2,3,4-trifluoroaniline	122375-82-0		Pharma/Synthetic intermediate
	Maximum Group-E		**1200.00**	

F	**Hydrolysis Intermediates**			
1	p-Nitrobenzamide	619-80-7	1200	Pharma drug
2	Resourcinol	108-46-3		Chemical intermediate
3	3,4,5-Trifluorophenol	99627-05-1		Pharma/Synthetic intermediate
4	4-Chloroaminophenol(4-CAP)	95-85-2		Chemical intermediate
5	2-Chloroaminophenol(2-CAP)	3964-52-1		Chemical intermediate
6	o-Chlorobenzaldehyde (OCBAD)	89-98-5		Cosmetics additives and Pharma intermediate
7	p-Chlorobenzaldehyde (PCBAD)	104-88-1		Pharma Intermediate
8	m-Chlorobenzaldehyde (MCBAD)	587-04-2		Pharma Intermediate
9	2,4-Dichlorobenzaldehyde (2,4-DCBAD)	874-42-0		Pharma Intermediate
	Maximum Group-F		**1200.00**	
G	**Halex Intermediates**			
1	2,3,4-Trifluoronitrobenzene	771-69-7	2400	Pharma Intermediates
2	p-Fluoronitrobenzene (PFNB)	350-46-9		Pharma Intermediates
3	o-Fluoronitrobenzene (OFNB)	1493-27-2		Pharma Intermediates
4	3-Chloro-4-fluoronitrobenzene (3,4-CFNB)	350-30-1		Pharma Intermediates
5	2-Fluoro-5-chloronitrobenzene (2,5-FCNB)	345-18-6		Pharma Intermediate , Veterinary drug intermediate
6	2-Fluoro-3-chloronitrobenzene (2,3-FCNB)	2106-49-2		Pharma Intermediates
7	2,4,5-Trifluoronitrobenzene (2,4,5-TFNB)	2105-61-5		Pharma Intermediates
8	2,4-Difluoronitrobenzene (2,4-DFNB)	446-35-5		Pharma Intermediates
	Maximum Group-G		**2400.00**	
H	**Sulphonation Intermediates**			
1	2-Amino-5-methylbenzenesulfonic acid (4B Acid)	88-44-8	3600	Pigment intermediate
2	2-Amino-4-chloro-5-methylbenzenesulfonic acid (2B Acid)	88-51-7		Pigment intermediate
3	N-ethyl-N-benzylaniline-3'-sulphonic acid (EBASA)	101-11-1		Dyes intermediate
4	p-Nitrotolyl-o-sulphonic acid (PNTOSA)	121-03-9		Pigment intermediate
5	p-Nitrochlorobenzene-o-sulphonic acid (PNCBOSA)	96-73-1		Pigment intermediate

6	o-Nitrochlorobenzene-p-sulphonic acid (ONCBPSA)	121-18-6		Pigment intermediate
7	o-Phenylenediamine sulphonic Acid (OPDASA)	7474-78-4		Pigment intermediate
8	2-Sulfobenzaldehyde sodium salt (BOSA)	1008-72-6		Pigment intermediate
9	4-Sulfobenzaldehyde sodium salt (BPSA)	5363-54-2		Pigment intermediate
10	p-Cresidine-o-sulphonic acid (PCOSA)	229-319-5		Food colour
	Maximum Group-H		**3600.00**	
I	**Alkylation Intermediates**			
1	p-Cresidine	120-71-8	1200	Food colour
2	2,4-Dichloro-6-aminophenol	527-62-8		Feed intermediate
3	p-Fluoroanisole	459-60-9		Fine chemical
4	o-Fluoroanisole	321-28-2		Fine chemical
5	2,4-Dinitroanisole	119-27-7		Fine chemical
	Maximum Group-I		**1200.00**	
J	**Ammonolysis Intermediates**			
1	2,4-Dinitroaniline	97-02-9	1200	Fine chemicals
	Maximum Group-J		**1200.00**	
K	**Condensation/Oxidation/Cyanation**			
1	m-Chlorobenzyl cyanide	1529-41-5	1200	Chemical Intermediate
2	p-Aminobenzonitrile	873-74-5		pigment Intermediate
3	2,6-Dichlorobenzonitrile	1194-65-6		Pharma Intermediate
4	4,4'-Dinitrodiphenyl ether (4,4'-DNDPE)	101-63-3		Pharma Intermediate
5	3,4-Dinitrodiphenyl ether (3,4-DNDPE)	2914-72-9		Pharma Intermediate
6	p-Anisaldehyde	123-11-5		Speciality chemical
7	p-Nitrobenzoic acid	62-23-7		Chemical Intermediate
8	Poly-(o-phenylenediamine)	-		Electronic chemical
9	p-Hydroxybenzaldehyde	123-08-0		Speciality chemical
	Maximum Group-K		**1200.00**	
L	**Grignard Reaction**			
1	Methyl-4-chloroacetoacetate	32807-28-6	1200	Pharma intermediate
	Maximum Group-L		**1200.00**	
M	**Hoffman degradation**			
1	3-Aminopyridine	462-08-8	600	Pharma intermediate
	Maximum Group-M		**600.00**	

N	**Skarup Synthesis and other**			
1	5-Chloro-8-hydroxy quinoline	130-16-5	600	Chemical Intermediate
2	8-Hydroxyquinoline	148-24-3		Chemical Intermediate
	Maximum Group-N		**600.00**	
	Total (MT/Annum) (Group A+B+C+D+E+F+G+H+I +J+K+L+M+N)		**27600.00**	

5. The PP reported that the existing land area is 4941 m^2, no additional land will be required for proposed expansion.

6. The PP reported that the unit has obtained Environmental Clearance from Ministry, vide letter J-11011/498/2008-IA-II(I) dated 10-12-2008.

7. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. River Damanganga is flowing at a distance of 4.55 km in SW direction.

8. The PP reported that the total water requirement is 962 KLD of which fresh water requirement of 370 KLD will be met from GIDC water supply department, Vapi. Effluent (Industrial) of 561 KLD, out of which 321 KLD of industrial effluent will be generated from process in which 221 KLD effluent having high COD & TDS & 100 KLD effluent having low COD & TDS. Balance 240 KLD of industrial effluent will be generated from DM reject, product washing, Floor/equipment washing, boiler blow down, softner reject, cooling tower blow down and scrubber. 100 KLD effluent having low COD & TDS will be generated from process and along with the normal effluent stream of product washing (150 KLD) & floor/equipment washing (25 KLD), total **275.0 KLD normal effluent** will be treated in primary, secondary and tertiary ETP and treated **52 KLD will be discharged into CETP Vapi** & treated 223 KLD will be sent to RO. **40 KLD** from DM reject, boiler blow down, Softner reject, cooling tower blow down & secondary scrubber water will be sent to RO along with treated normal stream effluent od 223 KLD. Total 263 KLD effluent will be treated into RO. 25 KLD RO reject will be sent to in-house MVR & 238 KLD RO permeate will be recycled into Floor/equipment washing, cooling & scrubber. From the process, total **221 KLD** of effluent will be generated having high COD and TDS (Concentrated effluent stream), which will be collected into separate /dedicated collection tank through closed pipeline, which will be separately treated in primary ETP along with 25 KLD RO reject. After than 246 KLD effluent will be treated into inhouse MVR. Treated effluent will be sent to **common MEE/CSD of M/s VGEL Vapi** through dedicated tanker **or treated into inhouse ATFD.** 244 KLD MVR/ATFD Condensate will be recycled into Floor/equipment washing, cooling & scrubber and 2 MT/Day ATFD salt will be sent to TSDF site. 25 KLD (HCl (15 to 30%), HBr (20 to 48%), Sodium bisulphite Solution (18 to 25%) from primary scrubber will be Sell to authorized end user registered under Rule-9. Domestic waste water

(10.0 KLD) will be treated into STP. STP treated water will be utilized for gardening within plant premises

9. The Power requirement after expansion will be 1650 kVA including existing 450 kVA and will be met from Dakshin Gujarat Vij Co. Ltd. (DGVCL). Existing unit has DG sets of 125 kVA, additionally unit has proposed 02 No. of DG sets capacity of 500 kVA. DG sets are used as standby during power failure. Stack (height 11.0 m) will be provided as per CPCB norms to the proposed DG sets.

10. Existing unit has 0.6 TPH LDO/CNG fired three nos of non-IBR boiler, 4.0 Lac Kcal/hr LDO/CNG fired one no. of thermopack, 125 kVA capacity diesel based one no. of D.G set which all will be discontinued after proposed expansion. Additionally, agro briquettes fired one no of steam boiler, 2.0 TPH natural gas fired one no of steam boiler, 0.6 TPH natural gas fired one no of steam boiler & 4.0 Lakh Kcal/Hr natural gas fired one no. of thermopack and 500 kVA capacity diesel fuel based two nos. of D.G set will be installed. D G set will be installed as a standby which will be used in case of power failure. Multi cyclone separator with bag filter with a stack of height of 30 m for agro briquettes fuel based steam boiler, adequate stack of height of 30 m for natural gas based steam boiler & thermopack and adequate stack of height of 11 m and acoustic enclosure & exhaust for D.G Set will be installed for controlling the particulate emissions within the statutory limit of 115 mg/Nm^3

11. The PP reported that the Public Hearing is exempted as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018 as the project site is located within GIDC Vapi which is declared as notified industrial area vide letter (Notification No.GHU-75-45-GID-1974-4084 (I0) CH dated 06.05.1975.

12. Industry has already developed 800 m^2 (16.19 %) greenbelt inside the plant premises and will be developing greenbelt [433.5 m^2 (8.77 %) inside plant premises + 988.2 m^2 (20 %) outside within GIDC, Vapi] in an area of 44.96 % i.e., 2221.7 m^2 out of total area:4941 m^2 of the project.

13. The estimated project cost is Rs. 43.75 Crores including existing investment of Rs. 20.60 Crores. The PP reported that total Employment will be 250 persons as direct & 300 persons indirect after expansion.

14. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the Greenbelt development plan and advised the PP to submit the same:

- Action plan for Greenbelt development plan.

The PP submitted the same and the EAC found it to be satisfactory.

15. After detailed deliberations, the EAC recommended the project for grant of ToR (Standard ToR [Annexure-II] and additional ToR as mentioned below), without public hearing as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.

(i) The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.

(ii) The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.

(iv) The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.

(v) The PP shall submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP shall submit the original test reports and certificates of the labs which have analysed the samples.

(vi) Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.

(vii) Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.

(viii) Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.

(ix) The PP shall submit an undertaking to the effect that the project is not a violation proposal in pursuant to the S.O. 804(E) dated 14.03.2017 and SoP dated 07.07.2021.

(x) Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.

(xi) Provision for reuse/recycle of treated wastewater, wherever feasible shall be made. The PP shall explore the possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal. A detailed water harvesting plan also needs to be prepared and submitted. Provision for Zero Liquid Discharge whenever

techno-economically feasible shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.

(xii) Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains in constructed reservoirs. The rain water shall not be put into groundwater strata.

(xiii) The PP shall clarify whether project involves ground water utilization. In case of ground water abstraction, a copy of application made to concerned authorities for the same need to be submitted.

(xiv) The PP should develop Greenbelt over an area of 24.96% (1233.5 m² within the premises), remaining 988.2 m² (20%) area shall be developed within the GIDC in consulation with Vapi Green society. Number of saplings selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.

(xv) Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.

(xvi) Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.

(xvii) In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels, and iii) best available technology for the plant.

(xviii) Certified compliance report from the IRO, MOEFCC for the existing EC shall be submitted as per OM dated 8.6.2022.

Agenda No. 66.4.

Proposed Expansion of Synthetic organic chemicals manufacturing unit with production capacity from 24000 TPA to 36000 TPA located at Plot No. 1 & 3, Gut No.37 & 38,170,187/1,187/2,188/1,188/2,189/1,189/2,191/2,191/6, 194, 256, Village Alonde, Taluka-Vikramgad, District Palghar, Maharashtra by M/s. Esteem Industries Pvt. Ltd. - Consideration of ToR (under violation)

[Proposal No. IA/MH/IND3/442473/2023; File No. IA-J-11011/344/2023-IA-II(I)]

1. The proposal is for the ToR for preparation of EIA/EMP for the Proposed Expansion of Synthetic organic chemicals manufacturing unit with production capacity from 24000 TPA to 36000 TPA located at Plot No. 1 & 3, Gut No.37 &

38,170,187/1,187/2,188/1,188/2,189/1,189/2,191/2,191/6, 194, 256, Village Alonde, Taluka-Vikramgad, District Palghar, Maharashtra.

2. The project/activity is covered under Category 'A' of Item 5(f), Synthetic organic chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) as the project is located outside the Notified Industrial Area.

3. The PP applied for the ToR vide proposal No. **IA/MH/IND3/442473/2023** dated 22.9.2023. The proposal is now placed in this 66th EAC Meeting held on 26th September, 2023 wherein the PP made an accredited Consultant, M/s. Sadekar Enviro Engineers Pvt. Ltd. [Accreditation number – NABET/EIA/2124/SA0146, Valid till 09-11-2023] a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the product details as follows:

Sr. No.	Name of Products	Existing (TPA)	Proposed (TPA)	Total (TPA)
1.	Surface active agents (Auxiliaries)	1200.00	8800.00	10000.00
2.	Emulsifiers	2000.00	00.00	2000.00
3.	Auxiliaries for Textile / Leather/ Paper / Cosmetics	1400.00	00.00	1400.00
4.	Auxiliaries textiles and leather	200.00	-200.00	00.00
5.	Carbamates	400.00	-400.00	00.00
6.	Amine Function Compound	200.00	-200.00	00.00
7.	Auxiliaries Inorganic compounds	100.00	-100.00	00.00
8.	Finishing Agents	1000.00	-1000.00	00.00
9.	Other polyetheners (Ethers)	400.00	400.00	800.00
10.	Emulsifier for Tanning	1400.00	-1000.00	400.00
11.	Softeners	2000.00	-1000.00	1000.00
12.	Coning oil	200.00	00.00	200.00
13.	Lacquer Emulsion	400.00	-400.00	00.00
14.	Fat liquor for leather	400.00	-400.00	00.00
15.	Detergent powder	200.00	-200.00	00.00
16.	Liquid detergents	200.00	-200.00	00.00
17.	Ethoxylates (Auxiliaries)	8000.00	7000.00	15000.00
18.	Propoxylates (Auxiliaries)	1200.00	00.00	1200.00
19.	E.O.P.O Block Polymers (Auxiliaries)	1000.00	00.00	1000.00

20.	Textile Auxiliaries	1700.00	-1700.00	00.00
21.	Cosmetic Chemicals / Emulsifiers	200.00	-200.00	00.00
22.	Paper Chemicals (Fine Chemicals)	200.00	-200.00	00.00
23.	Sulphated Products/ Sulphosuccinates	00.00	1500.00	1500.00
24.	Sorbitan Esters and Fatty Alcohol Based Esters	00.00	1500.00	1500.00
	Total	24000.00	12000.00	36000.00

5. The PP reported that Industry was Established in the year 2010, First CTE was obtained from MPCB obtained in the favour of M/s. Esteem Industries Pvt. Ltd. for Plot No. 1 (pt) & 2 to 10, Village. Alonde, Tal: Vikramgad, Dist. Thane Consent no: MPC/ROT/C/27 on 21/04/2010.

6. The PP reported that all the consents were granted by MPCB without imposing condition of obtaining prior EC and also granted CTO and renewed consent to operate time to time, project proponent was not aware about the applicability of EC, PP has not applied for EC before starting of construction & operation activities due to unawareness of the same hence it is a case of violation of EIA notification 2006 & amendment thereof, Till date, violation has not been identified by the MPCB however, on suo-moto basis PP is applying for obtaining EC for production capacity of Synthetic Organic Chemical from existing 24000 TPA to total of 36000 TPA, As the PP is suo-moto reporting of the violation of the existing project, penalty charges would be halved.

7. The PP reported that the existing land area is 97,549.48 m^2, and no land will be used for proposed expansion, no R&R is involved in the Project.

8. The PP reported that the proposal does not involve Approval/Clearance under Forest (Conservation) Act,1980, Wildlife (Protection) Act,1972 and CRZ notification, 2011 as amended. There is no forest, Eco sensitive areas/National Park/Wildlife Sanctuary in 10 km radius of the site. The project doesn't fall within the CRZ boundaries. Dehrja river is flowing at a distance of 1.52 km in northwest direction.

9. The PP reported that Existing water requirement is 122 m^3/day and after expansion total water requirement will be 302 m^3/day will be met from Ground water resources. From which 94.0 m^3/day will be recycled from total water requirement after expansion and will be reused in cooling tower. Existing domestic sewage is treated in secondary of the ETP and after proposed expansion all domestic sewage will be treated in proposed STP of capacity 25 CMD. Trade effluent will be generated from process (39 CMD) will be segregated into High COD/TDS (8 CMD) and Low COD/TDS (31 CMD), High COD & TDS streams (8 CMD) will be treated in primary (Collection tank & Neutralization tank) of the ETP, Primary treated effluent will be sent to 3 stage MEE followed by ATFD, Further, MEE+ ATFD condensate (8 CMD + 3CMD: 11 CMD) along with primary treated Low COD & TDS including utility blow down (46 CMD) will be treated in secondary (activated sludge process, MBR followed by secondary

clarifier), Treated effluent will be sent to tertiary treatment (Pressure sand filter, Activated carbon filter) & sludge treatment (filter press), Total ETP treated effluent (53 CMD) sent to Reverse Osmosis (RO), RO permeate (50 CMD) (95%) will be recycle into Cooling tower and RO reject (3 CMD) (5%) will be sent to MEE for further treatment, 24 TPA ETP Sludge will be sent to CHWTSDF, 4 TPA Salts generated from the ATFD will be disposed to CHWTSDF. The plant will be based on Zero Liquid discharge system.

10. The PP reported that the Power requirement after expansion will be 1024 KW including existing 1024 KW and will be met from Maharashtra State Electricity Distribution Company limited (MSEDCL). Existing unit has 2 nos. of D.G. sets of 500 KVA capacity fired by HSD, from which 1 no. of D.G set of 500 KVA capacity to be discontinued. In expansion, proposed 1 no. of D.G set of 750 KVA capacity fired by HSD will keep as standby and it will be used during power failure. Separate Stack of 3.5 m height for 1 x 500 KVA D.G set and Separate stack of 5.4 m height for 1 x 750 KVA D.G set will be provided as per CPCB norms to the Proposed DG sets.

11. Industry has already developed greenbelt in an area of 43.03 % i.e., 41,978.85 m^2 out of total area of the project.

12. The estimated project cost is Rs 112.10 Crores including existing investment of Rs 85.96 crores .and the Total Employment will be 600 persons (Existing – 480 & Proposed – 120) as direct 600 & 0 persons indirect after expansion.

13. **Deliberations by the EAC:**

The Committee deliberated on the certified compliance report issued by SPCB, Greenbelt/plantation, Monitoring reports and found it to be satisfactory. The EAC noted that no directon has been issued by MPCB.

14. The Committee, after detailed deliberations, **recommended** for issuing **Standard ToR [Annexure-II] with Public Hearing** as the project site is located outside the notified industrial area and the following **additional ToR**, as per the provisions of the EIA Notification, 2006 (as amended) and SOP dated 07.07.2021:

(i). The PP shall follow the Standard Operating Procedure (SoP) issued by the Ministry on 07.07.2021 for handling of violation cases under EIA Notification, 2006.

(ii). PP shall complete the Impact Assessment studies & submit Environmental Impact Assessment (EIA) report & Environmental Management Plan (EMP) (Damage Assessment, Remedial Plan and Community Augmentation Plan) in a time bound manner.

(iii). Assessment of ecological damage with respect to air, water, land and other environmental attributes. The collection and analysis of data shall be done by an environmental laboratory duly notified under the Environment (Protection) Act, 1986, or an environmental laboratory accredited by NABL, or a laboratory of a Council of Scientific and Industrial Research (CSIR).

(iv). Preparation of EMP comprising remediation plan and natural and community resource augmentation plan corresponding to the ecological damage assessed and economic benefits derived due to violation.

(v). The remediation plan and the natural and community resource augmentation plan to be prepared as an independent chapter (13) in the EIA report by the accredited consultants.

(vi). Budget of remediation plan and natural and community resource augmentation plan corresponding to the ecological damage shall be completed within three years and to be prepared accordingly.

(vii). The project proponent shall be required to submit a bank guarantee equivalent to the amount of remediation plan and natural and community resource augmentation plan with the SPCB prior to the grant of EC. The quantum shall be recommended by the EAC and finalized by the regulatory authority. The bank guarantee shall be released after successful implementation of the EMP, followed by recommendations of the EAC and approval of the regulatory authority.

(viii). Calculation of the penalty amount as per provision of SOP dated 07.07.2021 (i.e. 0.5% of the total project cost incurred up to the date of filing of application along with EIA/EMP report PLUS 0.125% of the total turnover during the period of violation) with supporting documents. In addition to this, actual production vis-a-vis CTO capacity financial year wise in a tabular format with supporting documents.

(ix). The State Government/SPCB to take action against the project proponent under the provisions of the Environment (Protection) Act, 1986, and further no consent to operate to be issued till the project is granted EC.

Agenda No. 66.5

Setting up of a new manufacturing unit of Synthetic Organic Chemicals with the production capacity of 597.5 MT/M located at Plot No. 141-2D + 141-2E, Notified GIDC Industrial Estate, Ankleshwar, District- Bharuch, Gujarat, India by M/s. Aum Vibrant Pharma LLP- Consideration of Environmental Clearance

[Proposal No. IA/GJ/IND3/440921/2023; File No. IA-J-11011/172/2023-IA-II(I)]

1. The proposal is for environmental clearance to the Setting up of a new manufacturing unit of Synthetic Organic Chemicals with the production capacity of 597.5 MT/M located at Plot No. 141-2D + 141-2E, Notified GIDC Industrial Estate, Ankleshwar, District- Bharuch, Gujarat, India by M/s. Aum Vibrant Pharma LLP.

2. The project/activity is covered under Category **'B'** of Item 5(f), Synthetic organic chemicals industry. However, **since the project site is located within a Critically Polluted Area**, the project attracts the general condition and considered as Category **'A'** at Centre.

3. The ToR was issued by the Ministry vide letter No. IA-J-11011/172/2023-IA-II(I) dated 15.8.2023. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Fresh EC case.** The proposal is now placed in the 66th EAC Meeting held on 26th September, 2023, wherein the PP and an accredited Consultant, **M/s. Siddhi Green Excellence Pvt. Ltd** (NABET Accreditation Certificate No. NABET/EIA/2225/RA 0280 valid till 06th October, 2025) made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the total land area is 21752 m^2, and no R& R is involved in the Project. The details of various products are as follows:

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
1.	Para Nitro Benzoic Acid	62-23-7	35	Dyes & Intermediates
2.	Ortho Nitro Benzoic Acid	552-16-9		
3.	Para Amino Benzoic Acid	150-13-0		
4.	Para Amino Benzamide	2835-68-9		
5.	Para Chloro Benzoic Acid	74-11-3		
6.	Ortho Chloro Benzoic Acid	118-91-2		
7.	3-Amino-4-Chloro Benzoic Acid	2840-28-0		
8.	3 Nitro 4 Methoxy Benzoic Acid	89-41-8	25	Dyes & Intermediates
9.	3 Amino 4 Methoxy Benzamide (Fast Red KL Base)	17481-27-5		
10.	3 Amino 4 Methoxy Benzanilide (Fast Red KD Base)	120-35-4		

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
11.	3 Nitro 4 Methoxy Benzanilide	97-32-5		
12.	5 Chloro 8 Hydroxy Quinoline	130-16-5	15	Dyes & Intermediates
13.	8 Hydroxy Quinoline	148-24-3		
14.	2,4 Di amino Toluene	95-80-7	35	Dyes & Intermediates
15.	1,8 Dinitro Naphthalene & 1,5 Dinitro Naphthalene	602-38-0 & 605-71-0		
16.	4 amino n (Tert Butyl) bezamide	93483-71-7		
17.	2-Amino-3,5 Di Bromo Benzaladehyde (ADBA)	50910-55-9		
18.	2,5 Dichloro Aniline (2,5 DCA)	95-82-9	60	Dyes & Intermediates
19.	3,4 Dichloro Aniline 6-Sulfonic Acid (3,4 DCASA)	6331-96-0		
20.	2-Chloro 5-Toludine 4-sulphonic acid (CLT Acid)	88-53-9		
21.	2-Chloro-4-Aminotoluene-5-Sulfonic Acid (2B Acid)	88-51-7	40	Dyes & Intermediates
22.	P-Toluidine-m-sulfonic acid (4B Acid)	88-44-8		
23.	3-Amino N-N Diethyl 4-Methoxy Benzene Sulphonamide (Fast Red ITR Base)	97-35-8		
24.	4-Chloro-o-toluidine (Fast red TR Base)	95-69-2		
25.	1 Phenyl 3 Methyl Pyrazolone (PMP)	89-25-8	40	Dyes & Intermediates
26.	1-(4-Tolyl) Phenyl 3-Methyl 5 Pyrazolone (PT	86-92-0		

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
	PMP)			
27.	3-Mehtyl 5-Pyrazolone	108-26-9		
28.	1-(3 Sulfo Phenyl) 3-Methyl- Pyrazolone (1,3 SPMP)	119-17-5		
29.	Naphthol AS	92-77-3	65	Dyes & Intermediates
30.	Naphthol ASLC	4273-92-1		
31.	Naphthol ASPH	92-74-0		
32.	Napthol ASITR	92-72-8		
33.	Naphthol ASTR	92-76-2		
34.	Naphthol ASOL	135-62-6		
35.	Naphthol ASBO	132-68-3		
36.	Naphthol ASBS	135-65-9		
37.	Naphthol ASD	135-61-5		
38.	Naphthol ASE	92-78-4		
39.	Naphthol ASG	91-96-3		
40.	Barbituric Acid	67-52-7		
41.	2,5-Dimethyl-P-Phenylene Diamine	6393-01-7	10	Dyes & Intermediates

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
42.	2-Amino Di Methyl Teraphalate	5372-81-6		
43.	Niclosamide (5-Chloro-N-(2-Chloro-4-Nitrophenyl)-2-Hydroxybenzamide)	50-65-7	1	Pharma / Intermediate
44.	Amlodipine Besylate(3-Ethyl 5-Methyl (4RS)-2-[(2-Aminoethoxy)Methyl]-4-(2-chlorophenl)-6-Methyl-1,4-Dihydropyridine-3,5-Dicarboxylate Benzenesulphonate)	111470-99-6	3.5	Pharma / Intermediate
45.	Bupropion Hydrochloride	31677-93-7	12	Pharma / Intermediate
46.	Drotaverine Hydrochloride	985-12-6		Pharma / Intermediate
47.	Quetiapine Hemifumarate	111974-72-2		Pharma / Intermediate
48.	Telmisartan	144701-48-4		Pharma / Intermediate
49.	Sofosbuvir	1190307-88-0	10	Pharma / Intermediate
50.	Ursodeoxycholic acid	128-13-2		Pharma / Intermediate
51.	Phthaloyl Amlodipine	88150-62-3	15	Pharma / Intermediate
52.	Iso Amyl Acetate	123-92-2	1	Pharma / Intermediate
53.	Iso Amyl Propionate	105-68-0	1	Pharma / Intermediate
54.	Iso Amyl Butyrate	106-27-4	1	Pharma / Intermediate

Sr. No.	Name of Product	HSN Code / CAS No.	Production Capacity (MT/Month)	End Use
55.	Phenyl Ethyl Acetate	103-45-7	1	Pharma / Intermediate
56.	Phenyl Ethyl Propionate	122-70-3	1	Pharma / Intermediate
57.	Methyl-3- Amino Crotonate	14205-39-1	5	Pharma / Intermediate
58.	Poly Allaylamine Hydrochloride	71550-12-4	200	Pharma / Intermediate
59.	Sevelamer Hydrochloride	152751-57-0	20	Hyper Phosphataemia
60.	Sevelamer Carbonate	845273-93-0		Hyper Phosphataemia
61.	Furosemide	54-31-9		Anti Diabetic
62.	Rabeprazole Sodium	117976-90-6		Pharma Intermediate
63.	Carvediol	72956-09-3		Hypertension
64.	Clopidogrel Bisulfate	120202-66-6		Heart attacks
65.	R & D Products	--	1	--
		Total	**597.5**	

5. The PP reported that there is no violation case as per the Notification No. S.O.804(E) dated 14.03.2017 and no direction is issued under the E(P) Act/Air Act/Water Act.

6. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, and Wildlife Corridors etc. within 10 km distance from the project

site. Narmada river is flowing at a distance of ~7 km towards NNW direction. Two Schedule-I species i.e Indian Peafowl (Pavo cristatus) and Bengal Monitor Lizard (*Varanus bengalensis*) are found in the study area for which conservation plan has been prepared and submitted to CWW on 7.8.2023.

7. The PP reported that the **Ambient air quality** monitoring was carried out at 10 locations during January 2021 to April 2021 and the baseline data indicates the ranges of concentrations as PM_{10} (54-89 $\mu g/m^3$), $PM_{2.5}$ (9-35 $\mu g/m^3$), SO_2 (8-28 $\mu g/m^3$) and NOx (11-32 $\mu g/m^3$) (98^{th} percentile values) respectively.AAQ modelling study for point source emissions indicates that the maximum incremental GLCs after the proposed new project would be 0.084 $\mu g/m^3$, 0.045 $\mu g/m^3$, 0.858 $\mu g/m^3$ and 0.517 $\mu g/m^3$ with respect to PM_{10}, $PM_{2.5}$, SO_2 and NOx. The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). **Noise level** -The ambient noise level measurements were carried out at 12 locations during January 2021 to April 2021 and the baseline data indicates: Measured Leq (Day) from 43 dB(A) to 73 dB(A) and Leq (Night) from 36 dB(A) to 60 dB(A).

8. **Ground water monitoring** was carried out at 10 locations during January 2021 to April 2021 and the baseline data indicates the ranges of parameters as: pH 7.25 - 8.30, Total hardness from 112 to 420 mg/L, TDS from 289.15 to 1728 mg/L, Chloride from 19-371 mg/L, Fluoride from <0.5 to 1.09 mg/L. **Surface water monitoring** was carried out at 18 locations during January 2021 to April 2021 and the baseline data indicates the ranges of parameters as: For pond water pH ranged between 7.55 - 8.64, TDS: 209 - 1378 mg/l, total hardness: 57-236 mg/l as $CaCO_3$, COD: 35 – 208 mg/L, DO: 3.3 – 6.4 mg/L, BOD: 16 – 98 mg/L. **Soil quality**: The soil quality monitoring was carried out at 12 locations during January 2021 to April 2021 and the baseline data indicates the ranges of concentrations as: pH of 5% leachate @ 25°C: 7.45 – 8.56, Electrical conductivity @ 25°C: 283.38 – 835.45 µ mhos/cm, Exchangeable Calcium (Ca): 332.56 – 3256 mg/kg, Exchangeable Magnesium (Mg): 52.55 – 109.48 mg/kg.

9. The PP reported that the total water requirement is 445 m^3/day of which fresh water requirement of 333 m^3/day will be met from GIDC water supply, balance 112 m^3/day from recycled water. Industrial effluent of 142 m^3/day shall be treated in own ETP consisting of Primary, Secondary & Tertiary treatment and 140 m^3/day treated water shall be discharged into GIDC underground drainage system and conveyed to FETP of M/s. NCT, Ankleshwar which ultimately leads to deep sea for final disposal through pipeline. 2 MT ETP sludge shall be disposed to TSDF site. Domestic effluent of 4 m^3/day will be treated through Sewage Treatment Plant (STP) & treated water shall be used for greenbelt development & maintenance purpose.

10. The Power requirement will be 500 KVA will be met from M/s. Dakshin Gujarat Vij Company Ltd. (DGVCL). 1 No. DG set of 500 KVA capacity will be used as standby during power failure for proposed project. Stack (11 m Height) will be provided as per CPCB norms to the proposed DG Set.

11. Boilers (2 nos. of 4 TPH each, 1 operational 1 standby) and Thermic Fluid Heaters (2 Nos. 10 Lakh kcal/h each) will be installed. Multi cyclone separator + Bag filter + water scrubber shall be provided for briquettes of Bio-coal based utilities & adequate stack height shall be provided for Natural gas based utilities. Natural gas OR Briquettes of Bio-coal shall be used as Fuel for boilers & Thermic Fluid Heaters, Diesel shall be used as Fuel for DG Set (stand by).

Proposed flue gas stacks:

Stack No.	Source of emission with Capacity	Stack Height- From G.L. (m)	Type of Fuel	Quantity of Fuel	Air Pollution Control Measures (APCM)	Type of emissions i.e. Air pollutants
1	Boiler-1 (Capacity: 4 TPH) Boiler-2 (Capacity: 4 TPH) Stand by	30	Natural Gas OR Briquettes of Bio-coal	8070 SCM/day OR 24 MT/day	Adequate stack height shall be provided OR Multi cyclone separator + Bag filter + water scrubber	PM SO2 NOx
2	Thermic Fluid Heater - 1 (Capacity: 10 Lakh kcal/hr)	30	Natural Gas OR Briquettes of Bio-coal	3360 SCM/day OR 8 MT/day	Adequate stack height shall be provided OR Multi cyclone separator + Bag filter + water scrubber	PM SO2 NOx
3	Thermic Fluid Heater -2 (Capacity: 10 Lakh kcal/hr)	30	Natural Gas OR Briquettes of Bio-coal	3360 SCM/day OR 8 MT/day	Adequate stack height shall be provided OR Multi cyclone separator + Bag filter + water scrubber	PM SO2 NOx
4	D.G Set (1 no. – 500 KVA) - Stand-by	11	Diesel (stand by)	100 L/h	Adequate stack height shall be provided	PM SO2 NOx

12. **Details of Process Emissions Generation and its Management**: The process emissions from the manufacturing processes shall be HCl, SO_2, Cl_2, NOx, NH_3 & HBr from manufacturing processes. Two stage Scrubbers with coolers shall be provided to respective reaction vessels to control the emissions. Proposed Process gas stacks, emission and control measures:

Stack No.	Specific source of emission (Name of product & process)	Stack/ Vent Height (m)	Air Pollution Control Measures (APCM)	Type of emission
1.	Scrubber vent attached to reaction vessel of Naphthol AS, Naphthol ASLC, Naphthol ASPH, Napthol ASITR, Naphthol ASTR, Naphthol ASOL, Naphthol ASBO, Naphthol ASBS, Naphthol ASD & Naphthol ASE, 2-Chloro 5-Toludine 4-sulphonic acid (CLT Acid)	20	Two stage Scrubber – water + caustic	HCl, Chlorine
2.	Scrubber vent attached to reaction vessel of 4-Chloro-o-toluidine (Fast red TR Base), 1 Phenyl 3 Methyl Pyrazolone (PMP), 1-(4-Tolyl) Phenyl 3-Methyl 5 Pyrazolone (PT PMP) & 1-(3 Sulfo Phenyl) 3-Methyl- Pyrazolone (1 3 SPMP)	20	Two stage Scrubber- water + caustic	SO_2, HCl
3.	Scrubber vent attached to reaction vessel of Niclosamide (5-Chloro-N-(2-Chloro-4-Nitrophenyl)-2-Hydroxybenzamide), Quetiapine Hemifumarate, Rabeprazole Sodium	20	Two stage Scrubber- water + caustic	SO_2, HCl
4.	Scrubber vent attached to reaction vessel of 2-Amino-3,5 Di Bromo Benzaladehyde (ADBA)	20	Two stage Scrubber - water	HBr
5.	Scrubber vent attached to reaction vessel of Para amino benzamide and 3-Amino 4-Methoxy Benzamide	20	Two stage Scrubber - water	NH_3
6.	Scrubber vent attached to reaction vessel of Para Nitro Benzoic acid, Ortho Nitro Benzoic Acid, Para Chloro Benzoic Acid & Ortho Chloro Benzoic Acid and 3-Nitro 4-Methoxy Benzoic Acid	20	Two stage Scrubber-caustic	NOx

13. **Details of Solid Waste/ Hazardous Waste Generation and its Management:** Solid waste/Hazardous Waste:

S. no.	Type/ Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules	Quantity (MT/ Annum)	Management of HW
1.	Used or Spent oil	From machinery	Cat.: 5.1 Sch.: I	2	Collection, Storage, Transportation & Disposal by reusing within plant as lubricant or selling it to authorized agency.
2.	Empty barrels/ Containers / Liners contaminate with hazardous chemicals/ wastes	From Raw material containers/ bags/ drums/ liners	Cat.: 33.1 Sch.: I	100	Collection, Storage, Decontamination, and Transportation & Disposal by recycle or reuse or send back to supplier or sent to authorized facility for decontamination
3.	Tarry Waste	During Production of product No. 15	Cat.:36.1 Sch.: I	24	Collection, Storage, Transportation & Disposal to Co-processing facility
4.	Chemical sludge from wastewater treatment	From ETP	Cat.: 35.3 Sch.: I	800	Collection, Storage, Transportation & Disposal to common TSDF facility
5.	Spent carbon	Manufacturing process	Cat.: 36.2 Sch.: I	264	Collection, Storage, Transportation & Disposal by sending for Co-processing / CHWIF.
6.	Process Residue	During Production of product No. 61, 62 & 63	Cat.: 28.1 Sch.: I	252	Collection, Storage, Transportation & Disposal by sending for Co-processing / CHWIF.
7.	Off specification	From production of Pharma	Cat.: 28.4	5	Collection, Storage, Transportation & Disposal to CHWIF/Co-processing/cement industry.

S. no.	Type/ Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules	Quantity (MT/ Annum)	Management of HW
	products	products	Sch.: I		
8.	Date expired products	From production of Pharma products	Cat.: 28.5 Sch.: I	5	Collection, Storage, Transportation & Disposal to CHWIF/Co-processing/cement industry.
9.	Distillation Residue	During Production of product No. 41 to 54 & 64	Cat.: 20.3 Sch.: I	132	Collection, Storage, Transportation & Disposal by sending for Co-processing / CHWIF.
10.	Iron sludge	During Production of product No. 3, 4, 9, 10, 14, 17, 18 & 20	Cat.: 26.1 Sch.: I	5100	Collection, Storage, Transportation & Disposal to TSDF/ Co-processing facility/ Cement Industry.
11.	20-22% NH_3 Solution	From scrubber attached to reaction vessel of product No.4	Cat.: A10 Sch.:II	1330	Collection, storage, transportation and disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9
12.	20-25% HBr solution	From scrubber attached to reaction vessel of product No.17	Cat.: B10 Sch.:II	888	Collection, storage, transportation and disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9
13.	20-25% Na_2SO_3 Solution	From scrubber attached to reaction vessel of product No. 24, 25, 26, 28, 43, 47 & 62	Cat.: B10 Sch.:II	2892	Collection, storage, transportation and disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9
14.	Spent	During	Cat.:	2892	Collection, storage, transportation

S. no.	Type/ Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Category and Schedule as per HW Rules	Quantity (MT/ Annum)	Management of HW
	sulphuric acid	Production of product No. 15 & 20	B15 Sch.:II		and disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9
15.	20-35% HCl sol.	From scrubber attached to reaction vessel of product No.24, 29-38, 43, 47 & 62	Cat.: B15 Sch.:II	1080	Collection, storage, transportation and disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9 or completely reuse in within premises (In ETP for neutralization purpose)
16.	Acetic Acid	During Production of product No. 23, 24 & 62	Cat.: B28 Sch.:II	444	Collection, storage, transportation and disposal by reusing in other process or disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9
17.	Sodium acetate	During Production of product No. 23,	Cat.: B28 Sch.:II	288	Collection, storage, transportation and disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9
18.	20-25% $NaNO_2$ solution	From scrubber attached to reaction vessel of product No.1, 2, 5, 6, 8 and during Production of product No. 62	Cat.: B31 Sch.:II	5832	Collection, storage, transportation and disposal by selling to authorized users having authorization with valid CTO and permission under Rule 9

Note: Spent Solvent generated from distillation 29280 MTM shall be recovered and reused in production through distillation columns having Primary and secondary condensers inbuilt with reactors.

Non- Hazardous Waste:

Sr. no.	Type/ Name of Hazardous waste	Specific Source of generation (Name of the Activity, Product etc.)	Proposed Quantity (MT/Annum)	Management of Non Hazardous Waste
1.	Ash	During combustion of Briquettes of Bio-coal	1440	Collection, Storage, Transportation, Sale to brick manufacturers or manufacturers of Cement articles or products
2.	STP Sludge	From sewage treatment plant	45	Collection, Storage, Transportation & Sent for Municipal waste disposal OR used as manure.

13. The Budget earmarked towards the Environmental Management Plan (EMP) is ₹ 5 Crore (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 5.1 Crore per annum. Industry proposes to allocate ₹ 1.8 Crore towards CER.

14. Industry will develop greenbelt over an area of ~40 % i.e. 3210 m^2 out of total area of the project.

15. The PP reported that the public hearing is exempted as per the Para 7.III. Stage (3) (i) (b) of the EIA Notification, 2006 as the project site is located within GIDC Estate Ankhleshwar which is declared as notified industrial area vide notification number No. GHU- 78-20-GID1977-660-CH dated dated 7.2.1978.

16. The PP proposed to set up an Environment Management Cell (EMC) by engaging Environment officials for the functioning of EMC.

17. The PP reported that the greenbelt trees shall sequester ~ 560 tons of CO2 during lifespan of 20 years (~28 tons of CO2 per year). This amount of sequestration potential is appreciable and shall significantly reduce the carbon footprint of the unit.

18. The PP submitted the Onsite and Offsite disaster management plans in the EIA report.

19. The estimated project cost is Rs. 45 Crores. Total Employment will be 30 Nos. persons as direct & 20 Nos. persons indirect after proposed new project shall become operational.

20. **Deliberations by the EAC:**

The EAC constituted under the provisions of the EIA Notification, 2006 comprising Expert Members/domain experts in various fields, examined the proposal submitted by the PP

in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an undertaking to the effect that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

The EAC noted that the EIA reports are in compliance with the ToR issued to the project, reflecting the present environmental status and the projected scenario for all the environmental components. The Committee deliberated on the proposed mitigation measure towards Air, Water, Noise and Soil pollutions. The Committee suggested that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on fuel, conservation plan for Schedule-I species, compliance to CPA as per OM dated 31.10.2019 and advised the PP to submit the following:

- Action plan for use of cleaner fuel
- Conservation plan for Schedule -I Species and acknowledgement for submission of the same from Chief Wildlife Warden.
- Revised compliance and action plan for the additional safeguard measures prescribed in the Ministry's OM dated 31.10.2019 for critically and severely polluted area.

The PP submitted the above information/documents and the EAC found these to be satisfactory.

The EAC deliberated the Onsite and Offsite Emergency plans and also the various mitigation measures proposed during the implementation of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, as amended from time to time.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The Experts Members of the EAC found the proposal in order and recommended for the grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to

the project. The PP shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

21. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I**:

i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards.

(i) CEMS shall be installed and connected to SPCB/CPCB Servers.

(ii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.

(iii) Transportation of materials by rail/conveyor belt, wherever feasible, shall be explored.

(iv) As proposed, agro-briquettes shall be used as a primary fuel in the boiler and natural gas shall be used as a secondary fuel during the unavailability of agro-briquettes.

(v) The best available technology shall be used.

(vi) The PP shall develop greenbelt over an area of 40 % within the project site, preferably within a year of the grant of EC. The 964 number of saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP shall annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(vii) The PP shall also develop avenue plantation, plantation in vacant areas, social forestry for tree plantation activities outside the premises at appropriate places in the nearby areas and elsewhere.

(viii) The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.

(ix) Industrial effluent @142 KLD shall be treated in own ETP consisting of Primary, Secondary & Tertiary treatment and 140 KLD treated water shall be discharged into GIDC underground drainage system and conveyed to FETP of M/s. NCT, Ankleshwar which ultimately leads to deep sea for final disposal through pipeline. 2 MT ETP sludge shall be disposed to TSDF site. Domestic effluent of 4 m^3/day shall be treated through Sewage

Treatment Plant (STP) & treated water shall be used for greenbelt development & maintenance purpose.

(x) Continuous monitoring system for effluent quality and quantity shall be installed and the same shall be connected to SPCB or CPCB server.

(xi) Unit shall provide one no. of underground tank of capacity 10 KL to store rain water during monsoon and utilize it for process operations and other activities after sufficient purification through filter media.

(xii) The reuse of treated industrial effluent shall affect the quality of products so it is not feasible to adopt ZLD.

(xiii) Sewage treatment Plant for Domestic effluent (4 KLD). Treated water shall be used for Greenbelt development and maintenance purpose.

(xiv) Unit shall follow guidelines of Fly Ash Management. Fly ash shall be sent to brick manufacturers or manufacturers of Cement articles or products. Iron sludge shall be disposed at TSDF site or sent to cement industry by after making MoU or co-processing.

(xv) Unit shall strictly comply with all the measures specified in guidelines for spent solvent management, spent acid management, and other guidelines/ directions published from time to time by GPCB and/ or CPCB, etc

(xvi) Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.

(xvii) An amount of ₹ 1.8 Crore shall be allocated towards CER for Green campaign, Sanitation, Rural Development, Water conservation, Energy conservation.

(xviii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions by engaging Environment officials. In addition to this, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xix) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP [₹ 5 Crore (Capital cost) and ₹ 5.1 Crore per Annum (Recurring cost)] shall be kept in a separate account and should

be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xx) The total water requirement shall not exceed 445 m^3/day of which fresh water requirement of 333 m^3/day will be met from GIDC supply and balance 112 m^3/day from recycled water. The PP shall ensure that water supply should not be above the permissible limit and fresh water shall be withdrawn only after obtaining requisite permission from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xxi) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.

(xxii) The PP shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xxiii) The project proponent shall comply with the environment norms for synthetic organic chemicals as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608 (E), dated 21. 7.2010 under the provisions of the Environment (Protection) Rules, 1986.

(xxiv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xxv) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xxvi) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(xxvii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxviii) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xxix) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xxx) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xxxi) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxxii) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xxxiii) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxxiv) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 66.6

Proposed expansion of different type of Resins in existing unit with production capacity of 1750 MT/M located at Survey No. 1627, Village: Khakhrechi, Taluka: Maliya, Dist. Morbi, Gujarat by M/s. Avance Decor LLP- Consideration of ToR

[Proposal No. IA/GJ/IND3/443758/2023; File No. IA-J-11011/348/2023-IA-II(I)]

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed expansion of different type of Resins in existing unit with production capacity of 1750 MT/M located at Survey No. 1627, Village: Khakhrechi, Taluka: Maliya, District Morbi, Gujarat by M/s. Avance Decor LLP.

2. The project/activity is covered under Category 'A' of item 5(f), Synthetic organic chemicals industry of Schedule of Environment Impact Assessment (EIA) Notification, 2006 (as amended) as the project is located outside the Notified Industrial Area. The proposal was placed before the EAC considering the environmental sensitivity i.e. location of the SH-7 at 0.15 km in SSW direction and Seasonal Stream at 0.01 km W direction from the project site.

3. The PP applied for the issue of ToR vide proposal number No. **IA/GJ/IND3/443758/2023** dated 22.9.2023. The proposal is now placed in this 66th EAC Meeting held on 26th September, 2023 wherein the PP made an accredited Consultant, M/s. T. R Associates. [Accreditation number –NABET/EIA/2326/RA 0293, Valid till 8.4.2026] a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the product details as follows:

Sr. No.	Name of Product	Proposed Resin Production Capacity	CAS No.
1	Phenol Formaldehyde Resin	500	9003-35-4
2	Melamine Formaldehyde Resin	250	9003-08-1
3	Urea Formaldehyde Resin	500	9011-05-6
4	Cardanol Phenol Formaldehyde Resin	500	--
	TOTAL	**1750 MT/M**	

5. The PP reported that the total land area is 21752 m^2, no additional land will be used for Expansion for proposed project.

6. The PP reported that there is no National Parks, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Wild Ass Sanctuary at 6.36 km in North direction, Eco-sensitive zone of Wild Ass Sanctuary at 5.10 km in North direction.

7. The PP reported that total water requirement for project will be 96.99 m^3/day of which Fresh water of 69.38 m^3/day will be met from GWIL (Gujarat Water Infrastructure Limited) balance

27.61 m^3/day will be recycled water. Effluent of 29.54 m^3/day quantity will be treated through Effluent Treatment Plant. The plant will be based on Zero Liquid Discharge System.

8. The PP reported that the Power requirement for proposed project will be 495 KVA and has met from PGVCL. D. G. Set (500 KVA X 1) [Fuel: Diesel (120 Lit./hr.)] will be provided and used only in case of power failure. Stack (15 meter) and Retrofit will provide as per CPCB norms to the DG set.

9. Industry will develop greenbelt over an area of 33 % i.e, 7178.90.10 m2 out of total area (21752 m^2) of the project.

10. The estimated total project cost is Rs 11.157 Crores (existing- 10.344 Crores + proposed- 0.813 Crores) and the Total Employment will be 50 persons as direct.

11. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the Environment sensitivity, applicability of ESZ, state highway and advised the PP to submit the following

- Distance of nearest stream, mitigative measures to minimize the impact on stream
- Guidelines, if any for the minimum distance to be maintained from the state highway.

The PP submitted the above information/documents and the EAC found it to be satisfactory.

12. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II]** and **additional ToR as mentioned below)**, **with public hearing** as per the provisions of the EIA Notification, 2006.

(i) The impact of the proposed project on the Nearest stream and the State Highway shall be assessed and accordingly, mitigative measures to minimize the impact shall be proposed.

Agenda No. 66.7

Proposed addition of Nano-Fertilizer (Nano DAP) in existing Fertilizer unit with production capacity of 36500 kL per year located at Kandla Unit at P.O. Box No. 12, Kandla, District-Kutch, Gujarat by M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO) - Consideration of Environmental Clearance

[Proposal No. IA/GJ/IND3/437120/2023; File No. J- 11011/202/2009-IA. II(I)]

1. The proposal is for the environmental clearance for the Proposed addition of Nano-Fertilizer (Nano DAP) in existing Fertilizer unit with production capacity of 36500 kL per year located at Kandla Unit at P.O. Box No. 12, Kandla, District-Kutch, Gujarat by M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO).

2. The project/activity is covered under Category 'A' of Item 5(a) Chemical Fertilizer (excluding formulations of Schedule of EIA Notification, 2006 (as amended).

3. The Standard ToR was granted by the Ministry, vide letter no. J-11011/202/2009-IA. II (I) dated 5.11.2022. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Expansion case.** The proposal is placed in this 66th EAC meeting on 26th September, 2023, wherein the PP along with accredited Consultant, M/s EQMS Global Pvt. Ltd (NABET Accreditation No.: NABET/EIA/2225/RA 0303 Valid Upto 23.11.2025)] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the existing land area is 704153.64 sq.m. Proposed expansion is planned within the existing premises. The details of products to be manufactured are as follows:

S. No.	Product	As per CTO (MT/Annum)	Proposed/ Additional (MT/Annum)	After Expansion (MT/Annum)	Remarks
1	NPK 10:26:26*	Fortified 0.5% Zn in NPK/DAP of Total Capacity of 10 Lac MT of P_2O_5	0	Fortified 0.5% Zn in NPK/DAP of Total Capacity of 10 Lac MT of P_2O_5	No Change
2	NPK 12:32:16*				
3	DAP 18:46*				
4	MAP 11:52*				
5	Urea Phosphate (17:44)	15000 MT of Bulk Capacity	0	15000 MT of Bulk Capacity	No Change
6	NPK Products by mixing sulphate of potash				
7	NPK 19:19:19 NPK 12:30:15 NPK 12:32:14 NPK 18:18:18 (By Mixing of solid raw materials in rotary mixers only)	15000 MT	0	15000 MT	No Change
8	Zinc Sulphate Monohydrate	30000 MT of Bulk Capacity	0	30000 MT of Bulk Capacity	No Change
9	**Nano-DAP**	**0**	**36500 kL per year**	**36500 kL per year**	**New Product**
Different grades of NPK/DAP/MAP/NP shall be manufactured in the plant.					

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 however, one Show Cause Notice has been issued by the GPCB vide letter dated 3.11.2018 and the reply for the same has been submitted on 14.11.2018 and 6.2.2019. CCA and its amendment were issued by GPCB on 18.12.2018 and 23.3.2022 respectively.

6. The PP reported that the Ministry had issued EC earlier vide letter no. J-11011/202/2009-IA. II(I) dated 13th May, 2009 to the Fertilizer Plant for manufacturing Water Soluble Fertilizers in favour of M/s Indian Farmers Fertiliser Cooperative Limited (IFFCO).

7. The PP reported that the Certified Compliance Report of the existing EC was issued by the IRO Bhopal vide letter 5-217/2009 (Env)/562 dated 9.8.2021 based on the site visit dated 3.6.2021. Out of total 27 conditions, 17 conditions are complied, 5 are partly complied, 1 is deemed complied and 4 are noted by the unit. Action taken report for the partly complied conditions has been submitted to IRO Gandhinagar. Closure of action taken report has been issued by IRO Gandhinagar vide letter dated 14.9.2023.

8. The PP reported that there are four Mangroves Patches (0.7km, 3.50 km, 4.61 km & 7.32 km) located within 10 km of the project and there are six water bodies in 10 Km radius i.e., Kandla Creek (10 Meters, E), Phang Creek (3.50 km, N), Sara Creek (4.91 km, N), Nakti Creek (5.43 km, W), Sanu Creek (6.50 km, N), Sakar River (8.06 km, SW). Four Schedule-I species i.e Indian Crested Porcupine, Indian Rat Snake, Indian Peafowl were observed in the 10 km radius from the proposed project for which conservation plan has been prepared and submitted to CWW on 8.7.2023.

9. The PP reported that **Ambient air quality** monitoring was carried out at Seven (7) locations Oct-2020-Dec,2020. The baseline data indicates that ranges of concentrations as: PM_{10} (41-88 $\mu g/m^3$), $PM_{2.5}$ (22-48 $\mu g/m^3$), SO_2 (5.6- 14.4 $\mu g/m^3$) and NOx (8.4-25.6 $\mu g/m^3$). The resultant concentrations are within the National Ambient Air Quality Standards (NAAQS). The manufacturing process of nano-fertilizer plant is a closed loop reactor vessel setup with regulated control. Hence, nano-fertilizers plant will not contribute to air emissions. There shall be no gaseous emission from Nano Fertilizer Unit. No additional process Stack is proposed in expansion and there shall be no gaseous emission from Nano Fertilizer Unit.

10. **Noise-** Ambient noise level monitoring was done at eight (8) locations during study period. Noise level values ranged from 52.8 to 63.2 dB(A) during day and 40.1 to 54.6 dB(A) during night-time. The noise levels observed in the project site and study are within prescribed limits except the location Khari Road & KASEZ Township. **Groundwater** quality monitoring was done at eight (8) locations during the study period. The pH ranged between 7.40 to 7.76, which are well within the specified standard of 6.5 to 8.5 limit. Total hardness levels were recorded in the range between 214 to 432 mg/l that falls within the permissible limit of 600 mg/l. Total dissolved solids were recorded in the range of 382 to 1496 mg/l that falls within permissible limits of 2000 mg/l. Chloride levels were recorded between 68 to 412 mg/l that falls within the range of permissible limit i.e., 1000 mg/l.

Sulphate levels were observed in the range of 26 to 230 mg/l and were within the acceptable limit i.e., 400 mg/l. Bacteriological studies reveal that no coliform bacteria are present in the samples. The heavy metal contents were observed to be in below detectable limits. Parameters for toxic substances were recorded within the permissible limits. All physical and general parameters were observed within the permissible limit as per IS10500:2012.

11. **Surface water quality** monitoring was done at five (5) locations during study period. Comparing the values of pH, DO, BOD and Total Coliforms with 'Use based classification of surface waters' published by Central Pollution Control Board; the analyzed surface waters is moderately polluted and classified as **"below 'E' Soil quality** monitoring was done at Eight (8) locations during the study period. As per the grain size distribution the percentage of Sand in all sampled soil was found varied from 72.3% to 85.2%, Silt varied from 8.2 to 15.7% and Clay from 6.6% to 20.2% during post-Monsoon season. Thus, the soil texture is Sandy Loam. The Organic Carbon content of sampled soil during study varied from 0.32% to 0.81%, thereby implying that soils are very low to high organic content. Available nitrogen content in the surface soils ranges between 79kg/ha to 128 kg/ha thereby indicating that soils are Low available nitrogen content. Available phosphorus content ranges between 7.1 kg/ha to 16.2 kg/ha thereby indicating that soils are low to medium in available phosphorus. Available potassiums in these soils range between 92 kg/ha to 292 kg/ha thereby indicating that the soils are low to high in potassium content.

12. The PP reported that the existing freshwater requirement of the plant is 1132.5 KLD (Industrial- 902.5 KLD; Domestic- 230 KLD) being sourced from Gujarat Water Supply & Sewerage Board (GWSSB). Under existing phase, Industrial wastewater along with effluent generated from the plant (124 KLD) is being collected in the Central Sump of NPK/DAP Plant from where it is completely recycled/consumed in the scrubber process of NPK/DAP plant because NPK/DAP plant is negative water balance plant. Hence, the plant is Zero liquid effluent discharge (ZLD) based plant. Domestic Sewage (200 KLD) is treated in Sewage Treatment Plant and the treated effluent is being used for horticultural purposes in the plant. Under proposed Nano-DAP fertilizer plant, wastewater generation from plant will be 35 KLD (Process & Washing- 2 KLD; Cooling Tower Blow Down- 24 KLD & Domestic Sewage- 9 KLD). Process effluent and cooling tower blow down will be discharged to Effluent Collection Pit that will be scrubbed in NPK-II Plant. Domestic sewage will be treated in proposed Sewage Treatment Plant (Capacity-10 KLD). Treated water will be reused for horticultural purposes.

13. The existing power requirement of the project is 15.5 MVA which is supplied by PGVCL (formerly known as Gujarat Electricity Board- GEB). No additional power required for the expansion. The existing unit has 2 DG set of 2x1010 KVA, after proposed expansion additional DG set of 1 x 300 KVA will be installed as power backup to be used during power failure. Stack will be provided as per CPCB norms to the proposed DG sets.

14. The existing unit has one coal fired boiler of 14 TPH & one FO based boiler of 16 TPH. ESP with a stack of height of 51 m already installed for controlling the particulate

emissions within the statutory limit of 150 mg/Nm3 for the existing boilers. No additional boiler will be installed.

FUEL REQUIREMENTS				
Particular	**Unit**	**As per CTO**	**Proposed**	**Total after Expansion**
Coal	MT/hr	12.96	0	12.96
Low Sulfur Furnace Oil*	kL/day	53	0	53

Low Sulfur Furnace Oil is used only when Hot Air Generator (HAG)for any train/Coal fired Boiler is under Preventive Maintenance. The Low Sulfur Furnace Oil consumption data is given assuming full load. Fuel for stand-by boiler will be Diesel/Natural Gas. Being a stand-by boiler, fuel requirement will be minimum (It will be operated when whole plant required to be taken in shut-down).

15. **Details of Process Emissions Generation and its Management:**

S. No	**Stack**	**Stack Height (m)**	**APCS**	**Velocity (m/s)**	**Temp. (^{0}C)**	**Flow (m^3/hr)**	**Type of Pollutant**
Existing							
Utilities							
1.	Boiler (Coal Based) – 14 TPH	51 m (Common Stack)	ESP	08-10	120-130	30000	PM, SO2, Nox
2.	Boiler (FO Based) – 16 TPH (standby)						
3.	Indirect Coal Fired Hot Air Generator for 2 Nos. providing hot air to Zinc Sulphate Plant	41 m common stock for Both HAG	ESP individually for each HAG	9-12	100-110	35000	PM, SO2, Nox
4.	DG Sets (2 x 1010 kVA)	Stack height: 28 m Stack Dia: 0.35 m	-	-	-	-	PM, SO2, Nox
Process Emission							
5.	Reaction Vessel- Zinc Sulphate Plant	23	Scrubber	08-10	60-70	8000	Acid Mist
6.	Spray Dryer-1	30	Quadruple Cyclone with	10-12	50-60	80900	PM

			Scrubber				
7.	Spray Dryer-2	30	Quadruple Cyclone with Scrubber	10-12	50-61	80900	PM
8.	6 Nos. Direct Coal Fired Hot Air Generator for providing Hot Air to NPK/DAP Plant (A, B, C, D, E & F Trains)	41 m for each train	Cyclone with wet scrubber	12-18	50-60	A Train: 266400 B Train: 266400 C Train: 283400 D Train: 283400 E Train: 332810 F Train: 332810	PM, NH_3, HF
9.	De-dusting System Unit 2 &3	31 m	Scrubber	9-10	45-50	45000	PM
10.	De-dusting System Unit (3 nos.)	41 m	Scrubber	9-10	45-50	30000	PM
PROPOSED							
1.	DG Set (1x300 kVA)	4 m	Stack Height	-	-	-	PM, SO2, Nox

16. **Details of Solid Waste/ Hazardous Waste Generation and its Management:**

Sr. No	**Type of waste**	**Category**	**Generation (MTPA)**			**Disposal Method**
			Existing	**Proposed**	**Total after Expansio**	

					n	
Hazardous Waste						
1	Used/spent oil	5.1	10	0	10	Reused in bagging machine for lubrication of slat conveyors or Collection, storage and selling out to registered re-cycler.
2	Chemical Sludge out of Zinc Sulphate	I-6.1	1650	0	1650	Collection, storage and selling out to registered re-cycler only.
3	Zinc Ash (Contain 75% in Container 1)	IV	14550	0	14550	Receiving storage and Recycling of ash as raw material in manufacturing of Zinc Sulphate Monohydrate
4	Plastic waste generated include paint buckets, chemical drums, HDPE/LDPE Tarpaulin, discarded BOPP bags etc.	33.1	185	0	185	Plastic waste is being disposed to recycler.
5	Discarded Barrels/ Containers/ Liners contaminated with hazardous chemicals / wastes	33.1	0	15000 No. of HDPE Drums	15000 No. of HDPE Drums	Collection, Storage, Decontamination and sale to authorized decontamination facility/ authorized recycler.
6	Bags contaminated with hazardous chemicals / wastes	33.1	0	150 MT/Year HDPE Bags	150 MT/Year HDPE Bags	Collection, Storage, and sale to authorized recycler
Non-Hazardous/Industrial						
7	Ash from	-	3200	0	3200	Used as filler in the

	coal Based boiler					plant
8	Scrap metals	-	1200	0	1200	Sent to recycler

17. The Budget earmarked towards the Environment Management Plan (EMP) is ₹ 1552.55 Lakhs (capital) and the Recurring Cost (operation and maintenance) will be about ₹ 3359.13 lakhs per annum. Industry proposes to allocate Rs. 1 Crore towards Corporate Social Responsibility.

18. The PP reported that in latest Environmental Clearance vide File No. J-11011/202/2009-IA. II(I) dated 13.05.2009, it was instructed that "the company shall develop the green belt in 33% area, out of total area to mitigate the effect of fugitive emissions and noise as per the guidelines CPCB". The IFFCO plant is located beside the Kandla creek. High salinity and sea water ingression in the project area has been noticed due to its closeness to Kandla creek. Saltwater intrusion has occurred in coastal aquifers at some areas of the Kandla including IFFCO Plant area. The soil of the plant area is highly saline. Hence the greenbelt development in the project area is a very tough task. Because of the high saline soil greenbelt development is not easy and the tree species could not flourish in the plant site. However, after subsequent efforts, IFFCO Kandla developed 44864 m^2 (4.45 ha) of green area in the existing premises. There are approx. 12210 no. of trees in the plant. Unable to enhance further green belt in the plant due to environmental limitations, IFFCO Kandla had then carried out mangrove plantation of 200 hectare in the nearest suitable stretch of Kachchh coast to comply environmental clearance for IKLL Jetty which is an integral part of IFFCO Kandla Complex. IFFCO had assigned GUIDE (Gujarat Institute of Desert Ecology) to carry out mangrove plantations on sites stretching out on Sat Saida Bet that is located nearby project site. The nearest mangrove plantation sites are located 3.75 km, N from the project site. **Hence, IFFCO had planted approx. 200 Ha. of mangrove plantation i.e., approximately 2.84 times of plot area (70.415364 Ha.) of IFFCO Kandla Complex.** Moreover**,** IFFCO has also developed the greenbelt on receptor-oriented approach as per CPCB greenbelt development guideline, March 2000 outside the plant premises to meet the required green belt due to adverse condition for greenbelt development within plant. Such as IFFCO has developed 30.35 ha (75 Acres) of green area in the IFFCO Udaynagar Township which is located approx. 10 kms (aerial) away from the project site where approx. 106986 no. of trees have been developed. Besides that, IFFCO has also developed 2.02 ha (5 Acres) green area in Gandhidham Town. Additionally, IFFCO has carried out green belt development in Pantiya village of Kutch District with approx. 11372 no. of trees in the village (96 Acres Area) under CORDET. In numerous efforts have been made for green belt development in other areas also. IFFCO being a conscientious organization regarding environment, the industry has still proposed for development of additional greenbelt admeasuring 1.10 Ha. area within the plant using Miyawaki Technique under which 33201 no. of trees will be planted. IFFCO has planned for a contribution of Rs. 1.952 Crores for the same.

19. The PP reported that the Public Hearing for the proposed project has been conducted by the State Pollution Control Board on 09.05.2023. The Main issues raised during the public

hearing are related to Education, air pollution, CER activities and Public was in favor of proposed plant. Details of Public hearing are given below.

S.No.	Objections/Suggestions/ Questions raised by Participant	Comments made by Project Proponent	Action Plan
1.	Education	Yes, we will continue to do what madam said for help.	**IRDP/CER (EDUCATION):** IFFCO regularly contributes for education and related facilities in nearby areas under its IRDP Programme. In year 2021-22, IFFCO contributed approx. Rs. 5.14 Lakhs and In year 2022-23 Rs. 8.79 Lakhs for distribution of school tables, green boards, computers, furniture, benches etc. to nearby schools. In the next 3 years, the industry shall contribute Rs. 20 Lakhs for infrastructural/repair work in schools, construction of classrooms & toilets, community halls etc.
2.	**Air Pollution**	Whatever development work is done from our side, we will do it further, Thank you.	**AIR POLLUTION:** Adequate APCM like Bag Filter, ESP, Scrubber Cyclone etc. has been installed to control air emissions from plant. The industry maintains emissions within permissible limits prescribed by GPCB. Under proposed expansion, the manufacturing process of nano-fertilizer plant

			is a closed loop reactor vessel setup with regulated control. Hence, nano-fertilizers plant will not contribute to air emissions. **CER (GREEN BELT):** Industry has done enormous green belt plantation outside the plant complex till date. In year 2020-21, IFFCO spent Rs. 23,600 in greenbelt development in Customs House, Kandla. Under proposed expansion, IFFCO will contribute Rs. 35 Lakhs in next 3 years. **CER (COVID RELIEF):** In year 2020-21, IFFCO spent approx. Rs. 10.02 Lakhs for food & ration supplies during COVID.
3.	Deputy collector Mr. Desai Sir and the Regional Officer of pollution department and everyone, as far as pollution is concerned, there is no pollution here, so there is no population here, so there is very little pollution. It should not be brought because first of all it is urea, why did we bring this Nano urea of IFFCO so that it does not harm the mother earth where 50 kg had to be put, then we get result even in half of kg. Even in agriculture, there are many chemicals, this company has replaced many biological Bacteria, where the mother land of India is now polluted and we are trapped, agriculture is also	Thank You.	-

	trapped and people are also trapped in eating. The efforts of this IFFCO organization to liberate they are commendable. and all kinds of biological bacteria are also found here with the farmers, if such co-operative organization will cooperate within this country, then the health of the people will also improve and at the same time your mother land will also alive. You will carefully check on such units. I will request the pollution board to do a thorough investigation on the units where there is more pollution and damage to the agriculture. I also request my journalist friends, this is our country, and our future generation also have to live on this mother land or country. Let us think that in coming days we should make efforts so that our generation does not suffer. Bharat Mata Ki Jai…		
4.	CER activities	Thank You.	**CER (Health Care):** Under its IRDP, IFFCO has supplied 35 no. of medical oxygen cylinders to Arya Samaj, Gandhidham and Physiotherapy Unit to nearby hospital located in Gandhidham. There is one Government Hospital located nearby project at 1.96 km in SW direction. The industry shall contribute for improvement in infrastructural & transportation facilities in the government

			hospital for better access to affected people. Under proposed expansion, the industry shall contribute approx. Rs. 20 Lakhs in the next 3 years for healthcare facilities. Facilities for treatment of affected people within the Kandla Complex are covered within OHC & IFFCO Kandla Township Hospital.
5.	Namskar sir, my name is Navalal Budhwari. I live in the neighbouring village Mithapur. Which is right next to IFFCO. There is a school facility and everything is good, the road is so bad, that we leave there now, the condition of the car will be bad, the road is bad for a couple of kilometres, the second monsoon comes and even without monsoon, water enters the house. When the tides comes in the sea. There is a big tide on the 15th day, then the water comes in our house, there will be almost one or two houses left that water will not enter it. It is big problem that water comes even at 2.30 am and also during the day. We have presented in IFFCO and we have presented the construction of embankment and our presentation of the road is all that we have to say.	As per proposal presented by you industry will always do what we can do for your people and our surrounding villages. Thank you.	The industry shall contact local authorities for repairment of roads and drainage networks in surrounding areas of IFFCO Kandla Complex. IFFCO shall contribute approx. Rs. 10 Lakhs in next 3 years for such activities after taking consultation with local authorities.
6.	Sir, just introduced to you. It has already been presented that we have a sea hole which all the water is combining from the sea, that it cannot stay. So, sir help		

	us. Our children do not have slippers on their feet when they leave the house. Why wear slippers if they are muddy? Sir.		
7.	Namskar, My name is Panchal Dharmendra Hareshbhai. I am a farmer. Village Chobari. This time I gave a coat of DAP as well as Nano DAP and the result is very good like DAP and the cost is reduced and the result is better. The reduction of chemicals in the soil has greatly benefited the farmer.	-	-
8.	Piyushbhai Vora, village Gandhidham. Sir, the hospital that I spoke to, the company gives a reply to this matter, if it will come and do such a good job, please reply to me. You must also realize that there are three railway crossings on the road and an ambulance comes from ten kilometres away. It takes me one to one and a half hours to reach home because of the railway crossing and you also know that it is very difficult for people to come and go if there is an accident or someone gets seriously ill. The hospital is 10 KM away. There is no other hospital you will know all this. So, that's what I'm saying prepare whole map and a hospital should be built. This is my humble request.	Response by the project Proponent: Thank you for your request, which is within our scope. IFFCO is an organization, some of them own activities, for the service of farmers we will need what can be done with the government. DPT is also here, so the authority under which it is, I think that if you request from them too, then it will be fine. Thank you. Thank you. As you must have seen that the government is building a very good flyover and bridge here, so whatever the problem is, we think, it will be removed very soon and the rest of what you are saying, IFFCO always ready to serve. Thank You.	**CER (Health Care):** Under its IRDP, IFFCO has supplied 35 no. of medical oxygen cylinders to Arya Samaj, Gandhidham and Physiotherapy Unit to nearby hospital located in Gandhidham. There is one Government Hospital located nearby project at 1.96 km in SW direction. The industry shall contribute for improvement in infrastructural & transportation facilities in the government hospital for better access to affected people. Under proposed expansion, the industry shall contribute approx. Rs. 20 Lakhs in the next 3 years for healthcare facilities. Facilities for treatment of affected people within the Kandla Complex are covered within OHC & IFFCO

			Kandla Township Hospital.

20. The PP proposed to set up an Environment Management Cell (EMC) by engaging Unit head- HOD (Technical) – HOD Process Engineering- HOS (Laboratory) for the functioning of EMC.

21. The PP reported that the Considering a 10-year-old Greenbelt of 33201 trees and assuming the dia and tree heigh at the age of 10 years as per the standards, the total Carbon sequestered per year by the proposed greenbelt at its initial age will be 1192.14 tons per year.

22. The PP submitted the Disaster Management Plan and On-site and Off-site Emergency Plans in the EIA report.

23. The estimated cost for the proposed project is **Rs. 325 Crores**.Total Employment will be 2404 persons as direct after expansion**.**

24. **Deliberations by the EAC:**

The EAC constituted under the provisions of the EIA Notification, 2006 comprising expert members /domain experts in various fields, examined the proposal submitted by the PP in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

The EAC noted that the EIA reports are in compliance with the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the fuel, existing and proposed greenbelt development and advised the PP to submit the following:

- Action plan for use of cleaner fuel.
- Justification for the compliance of the existing greenbelt and action plan for the proposed greenbelt development.

The PP submitted the above information/documents and the EAC found these to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during the implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The PP shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

25. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I**:

(i) The PP shall make all efforts in consultation with expert agencies to develop Greenbelt over an area of (33%), within the premises. The saplings selected for the plantation should be of sufficient height, preferably 6-ft (about 2 m). The budget earmarked for the plantation shall be kept in separate account and should be audited annually. PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time), details of the expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(ii) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the. PP shall engage Unit head- HOD (Technical) – HOD Process Engineering- HOS (Laboratory). In addition to this one safety & health officer as per the qualification given in Factories Act 1948 shall be engaged within a month of grant of EC. PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC

along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iii) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget propose under EMP is ₹ 1552.55 Lakhs (Capital cost) and Rs. 3359.13 lakhs per annum (Recurring cost) shall be kept in separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(iv) As proposed Low Sulfur Furnace Oil/ coal shall be used as a primary fuel. The phasing out of coal may be explored**.**

(v) The freshwater requirement of the plant shall not exceed 1132.5 KLD (Domestic- 230 KLD; Industrial- 902.5 KLD shall be met from Gujarat Water Supply & Sewerage Board (GWSSB). The PP shall ensure that water supply should not be above the permissible limit and fresh water shall be withdrawn only after obtaining requiste permission from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(vi) Wastewater generation from plant shall be 35 KLD (Process & Washing- 2 KLD; Cooling Tower Blow Down- 24 KLD & Domestic Sewage- 9 KLD) for the proposed expansion. Process effluent and cooling tower blow down shall be discharged to Effluent Collection Pit and that shall be scrubbed in NPK-II Plant. Domestic sewage shall be treated in the proposed Sewage Treatment Plant of Capacity-10 KLD. Treated water shall be reused for horticultural purposes.

(vii) No banned chemicals shall be manufactured by the project proponent. No banned raw materials shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(viii) The project proponent shall comply with the environment norms for Chemical Fertlizer Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 1607 (E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.

(ix) The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing

more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(x) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xi) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xii) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xiii) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xiv) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xv) The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xvi) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flameproof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be provided with vent condensers with chilled brine circulation.

(xvii) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

(xviii) The activities and the action plan proposed by the project proponent to address the issues raised during the public hearing as well as the related socio-economic issues in the study area shall be completed as per the schedule presented before the Committee and as described in the EIA report in letter and spirit.

Agenda No. 66.8

Proposed addition for Manufacturing of Fortified Liquid Boronated Calcium Nitrate (LBCN) Plant with production capacity of 1100 KLPA (3.333 KLPD) in existing premises located at P.O. Fertilizernagar, Taluka & District- Vadodara, Gujarat by M/s Gujarat State Fertilizers & Chemicals Limited (GSFC) -Consideration of Environmental Clearance.

[Proposal No. IA/GJ/IND3/442552/2023; File No. J-11011/901/2007-IA-II(I)]

1. The proposal is for the environmental clearance for the Proposed addition for Manufacturing of Fortified Liquid Boronated Calcium Nitrate (LBCN) Plant with production capacity of 1100 KLPA (3.333 KLPD) in existing premises located at P.O. Fertilizernagar, Taluka & District- Vadodara, Gujarat by M/s Gujarat State Fertilizers & Chemicals Limited (GSFC).

2. The project/activity is covered under Category 'A' of Item 5(a) Chemical Fertlizer (excluding formulations of Schedule of EIA Notification, 2006 (as amended). The PP reported that the project is located in the Critically Polluted area therefore, attracts the general condition.

3. The Standard ToR was granted by the Ministry, vide letter no. J-11011/901/2007-IA-II(I) dated 26.11.2022. The PP applied for Environment Clearance in the Common Application Form and submitted EIA/EMP Report and other documents. The PP in the Form reported that it is a **Expansion case.** The proposal is placed in this 66th EAC meeting on 26th September, 2023, wherein the PP along with accredited Consultant, M/s EQMS Global Pvt. Ltd (NABET Accreditation No.: NABET/EIA/2225/RA0303 Valid Upto 23.11.2025)] made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported that the The total land area is 3280000 m^2 (328 Hectares). Recently, 0.65 Ha. of area has been diverted for Bullet Train Project to Government of Gujarat. The net plot area of the project is 327.35 Ha. The proposed expansion will be set up over 945 m^2 area within existing premises of GSFC Complex.The details of products to be manufactured are as follows:

S.No.	Products	CAS No.	Details			END-USE
			As per Latest EC & CTE	Proposed	Total after Expansion	
			MTPA	MTPA	MTPA	

PROPOSED							
1	**Fortified Liquid Boronated Calcium Nitrate (LBCN)**		**13477-34-4**	**0**	**1100 KLPA (3.333 KLPD)**	**1100 KLPA (3.333 KLPD)**	**Fertilizers**
AS PER LATEST ENVIRONMENTAL CLEARANCE							
1	Sulphuric Acid	Sulphuric Acid-III	7664-93-9	132000	0	796500	Fertilizers
		Sulphuric Acid-IV		445500			Fertilizers
		Sulphuric Acid-V		219000			Fertilizers
2	Melamine	Melamine-I	108-78-1	5000	0	55000	Plastic Industries
		Melamine-II		10000			
		Melamine-III		40000			
3	Urea	Revamped Urea Unit (Urea- I & II)	57-13-6	367200	0	367200	Fertilizers & Synthetic Organic Chemicals
4	TGU	TGU		124100	0	124100	Various uses in small scale industries
5	Ammonium Sulphate	Ammonium Sulphate -I	7783-20-2	146000	0	488000	Fertilizers
		Ammonium Sulphate-II		80000			
		Ammonium Sulphate -III		116000			
		Ammonium Sulphate-IV		146000			
6	HAS/HX Crystal*		10039-54-0	7800	0	7800	Pharma, Dye & Dyestuff & Agro chem
7	Phosphoric Acid		7664-38-2	54000	0	54000	Fertilizers
8	Phosphogypsum		-	253260	0	253260	Soil Conditioner
9	DAP/ASP/MAP/NPK		7722-76-1	216000	0	216000	Fertilizers
10	Nitric Acid (By-product of Capro-II)		7697-37-2	8300	0	8300	Fertilizers
11	Ammonia	Ammonia-III	1336-21-6	33000	0	33000	Fertilizers

12		Ammonia-IV		450000	0	450000	Fertilizers
13	Urea Phosphate		4861-19-2	1500	0	1500	Fertilizers
14	WSF-NPK (19:19:19)		66455-26-3	1800 MTPM	0	1800 MTPM	Fertilizers
15	WSF-MAP/MKP/KNO3/SOP		66455-26-3	900 MTPM	0	900 MTPM	Fertilizers
16	Micronutrient Mixture		7757-79-1	4.5 MTPM	0	4.5 MTPM	Fertilizers
17	Nylon-6	Nylon-6 -I & II	32131-17-2	69 MTPD or 24425	0	69 MTPD or 24425	Automobile, Electrical and Hardware
18		Nylon-6 - III		1735 MTPM	0	1735 MTPM	Automobile, Electrical and Hardware
19	Argon		7440-37-1	3200000	0	3200000	Internal
20	Co-Generation Plant	Co-generation - I (Power)	-	15 MWH	0	15 MWH	Captive Power
21		Co-generation - I (Steam)		130 MT/hr	0	130 MT/hr	Captive Power
22		Co-generation - II (Power)		25 MWH	0	25 MWH	Captive Power
23		Co-generation - II (Steam)		130 MT/hr	0	130 MT/hr	Captive Power
24		Co-generation - III (Power)		50 MWH	0	50 MWH	Captive Power
24		Co-generation - III (Steam)		130 MT/hr	0	130 MT/hr	Captive Power
25	Capro-lactam	Caprolactam -I		20000	0	20000	Petroleum based processing
26		Caprolactam -II		50000	0	50000	Petroleum based processing
27	MEK Oxime		96-29-7	6500	0	6500	Organic Compound

28	Methanol	67-56-1	191625	0	191625	Solvent
29	Sardar Amin Granules (SAG) through mixing process	-	5000	0	5000	Fertilizers
30	Sardar Amin Liquid (SAL) through mixing process	-	40000 Lit/yr	0	40000 Lit/yr	Fertilizers
31	S90WDmG- Sulphur 90 Water Dispersible Micro Granules (by mixing process)	-	22 MTPD or 8030	0	22 MTPD or 8030	Fertilizers
32	Gypsum Granulation (GG)*	-	36000 (100 MTPD)	0	36000 (100 MTPD)	Fertilizers/Soil Conditioner
Industry had also proposed "New Gypsum Granulation Plant (100 MTPD/36000 MTPA) & Expansion of HX/HAS Crystal (7800 MTPA)". However, Granular Gypsum being a soil conditioner & HAS/HX Crystal an inorganic chemical compound, do not fall in purview of EIA Notification,2006 & its subsequent amendments. At the time of grant of TOR Application for current proposal, the CTE Application for GG & HAX Crystal was in process. Consent to Operate for the products as per latest EC Granted has been granted from Gujarat Pollution Control Board vide Order No. GPCB/CCA-VRD-83(15)/ID-21968/; 749788 dated 3.08.2023.						

5. The PP reported that there is no violation case as per the Notification No. S.O. 804(E) dated 14.03.2017 and no direction is issued under E (P) Act/Air Act/Water Act.

6. The PP reported that the Ministry had issued Environmental Clearance from vide File No. IA-J-11011/901/2008-IA. II(I) dated 11t^{h} April, 2022 for "***Amalgamation of Environmental Clearances and Expansion/Amendment of plants in existing GSFC Complex***". However, expansion components as per the latest environmental clearance are under progress. The unit is operational as per Latest Consolidated Consent and Authorization (CC&A) granted from GPCB vide Consent Order No. AWH-117101 dated 15.02.2022 valid upto 30.09.2028. Under Atma Nirbhar Bharat Programme, taking into consideration the increasing demand of Calcium Nitrate soon, the industry has proposed for "Manufacturing of Fortified/Liquid Boronated Calcium Nitrate (LBCN) Plant in existing GSFC Complex". The total capacity of the proposed LBCN Plant will be 1100 KLPA (3.333 KLPD)

7. The PP reported that the Certified Compliance Report of earlier Environmental Clearances has been obtained by IRO, MoEF&CC vide Letter No. J-11/55-2023-IROGNR dated 10th August,2023 based on the site visit dated 16.5.2023 Out of total 296 conditions, 176 conditions are complied, 1 non complied, 29 are partly complied, 39 are agreed to comply and 13 are noted by the unit and 18 conditions are not applicable to the unit and 20

conditions can't be acertained. Action taken report for the partly complied conditions has been submitted to IRO Gandhinagar vide letter dated 6.9.2023.

8. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. There are few distributaries within 10 km distance of the project site like Galiath River (4.58 km, NE), Vishwamitri River (5.71 km, E), Meni River (7.00 km, W), Parevi River (7.08 km, N), Surya River (8.04 km, E) & Mahi River (9.35 km, W). However, distributaries or rivers located nearby project site are dry riverbeds. There are 3 Schedule-I species in 10 km study area of the project i.e., Flap shell Indian Turtle (*Lissemys punctata),* Crocodile (*Crocodylus palustris) & Indian Peafowl (Pavo cristatus).* For which consdervatuion plan has been submitted to Chief Wildlife Warden and the same has also been approved vide Letter no. WLP/32/C/144-146/2021-22 dated 06.05.2021.

9. The PP reported that **Ambient air quality** monitoring was carried out at 9 locations during December,2020 to February,2021 and the baseline data indicates the ranges of concentrations as: PM_{10} (40-96 μg/m^3), $PM_{2.5}$ (18-49 μg/m^3), SO_2 (5-12.8 μg/m^3) and NOx (9-20.6 μg/m^3). The 98%tile observed to be within the limits of standards prescribed by NAAQS, 2009 for all parameters. Under the proposed LBCN Project, there will be no gaseous emissions from the project. However, there will be generation of minor amounts of CO_2 emission during mixing of calcium carbonate, nitric acid, and water in reactor. **Noise** Levels Ambient noise monitoring was done at seven locations within the study area. The noise levels observed in the project site and study are within prescribed limits except at N-6 i.e., Sumant Park located 4.85 km in SW direction of the project. As per the results, it has been observed that noise levels are higher in residential areas than industrial areas. Sumant Park (N-6) is surrounded by various residential areas and townships which leads to community noise. Vehicular traffic in the area also contributes to the increased noise levels in the area. Ground water was monitored at eight locations in the study area. The analysis results indicate that the pH ranged between 7.09 to 7.62 which are well within the specified standard of 6.5 to 8.5 limit. Total hardness levels were recorded in the range between 56.11 to 561 mg/l that is within permissible limits of 600 mg/l. Total dissolved solids were recorded in the range of 312 to 1140 mg/l that falls within permissible limits of 2000 mg/l. Chloride levels were recorded between 31.3 to 166.32 mg/l that falls within the range of permissible limit i.e., 1000 mg/l. Sulphate levels were observed in the range of 36.81 to 82.19 mg/l and were within the acceptable limit i.e. 400 mg/l. Bacteriological studies reveal that no coliform bacterial are present in the samples. The heavy metal contents were observed to be in below detectable limits. Parameters for toxic substances were recorded within the permissible limits. All physical and general parameters were observed within the permissible limit as per IS10500:2012 (Second Revision). Thus, it is recommended that water be filtered and disinfected prior to be given for drinking water requirements.

10. **Surface water** was monitored at seven locations in the study area. The pH values of all analyzed samples ranged between 7.12 – 7.86. TDS levels were observed to be in range from 206 to 482 mg/l. Total hardness levels were observed to be in the range of 118 to 220 mg/l. Dissolved Oxygen values ranged between 4.9 to 6.9 mg/l. The chlorides level was

observed to be in range of 29.35 to 125 mg/l. Sulphate level were found to be ranging from 18.05 to 48 mg/l. Nitrate levels were found to be observed within the range of 1.34 to 12.36 mg/l. Total Coliform levels were found to be in the range of 0.94*103 to 1.7*103 MPN/100 ml. Biochemical Oxygen Demand (BOD) was observed to be in range of 2.6 to 12 mg/l. Comparing the values as per classification for designated best use water quality criteria by CPCB, all surface water locations were classified under "Class C- Drinking water source after conventional treatment and disinfection" except SW-4 i.e., Parevi River which has been categorized under "Class B- Outdoor Bathing (Organized)". **Soil quality** monitoring was done at six (6) locations during the study period. As per the grain size distribution the percentage of Sand in all sampled soil was found varied from 54.9% to 62.52%, Silt varied from 17.17% to 21.6% and Clay from 16.32% to 26.36% during study season. Thus, the soil texture is Sandy Clay loam. The soil pH ranges were observed from 7.1 to 8.01 during study season, thereby indicating the soil is "Slightly alkaline" in nature. The Organic Carbon content of sampled soil during study seasons varied from 0.5% to 1.48%, thereby implying that soils are low with organic carbon content except at S-4 where Organic Carbon content is 1.48%. Available nitrogen content in the surface soils ranges between 242 kg/ha to 340 kg/ha thereby indicating that soils are medium to high in available nitrogen content. Available phosphorus content ranges between 17.66 kg/ha to 23.1 kg/ha thereby indicating that soils are medium in available phosphorus content. Available potassium content in these soils' ranges between 158 kg/ha to 218 kg/ha thereby indicating that the soils are medium in potassium content. Based on Nutrient Index Value for N, P and K, the soils of study area fall into Medium Fertility Status.

11. The PP reported that as per latest Environmental Clearance & CTE, the total water requirement of the project is 43961.05 KLD. Out of which, freshwater requirement is 36206.25 KLD being sourced from 4 no. of French wells by Mahi River located at Parthampura (2 no.) and IOCL Refinery (2 no.) respectively. The rest of the water requirement is being sufficed by reusing 7754.8 KLD of process effluent and RO treated water. For the LBCN project, the total water requirement will be 3.33 KLD. Out of which, 1.13 KLD freshwater will be supplied by existing freshwater sources. The rest of the requirements will be met by reusing 2.2 MTPD steam condensate within the project. 2.2 MTPD steam will be used as a utility. Total water requirement after expansion will be 44056.41 KLD.

12. As per latest environmental clearance & CTE, the total wastewater generation from the project is 17259.1 KLD (Domestic Sewage: 3622.1 KLD; Industrial Effluent: 13637 KLD). Total Industrial effluent being generated from the plant is 13637 KLD (Washing, Regeneration Wastewater: 4900.4 KLD; Cooling Tower/Boiler Blowdown: 6050 KLD and Process Effluent: 2686.6 KLD). Process effluent will be treated in Effluent Treatment Plant (ETP-I: 1200 KLD; ETP-II: 1920 KLD) and at RO treatment in M-III. 2686.6 KLD ETP treated water along with industrial effluent (4900.4 KLD of washing & regeneration wastewater along with 6050 KLD of boiler & Cooling Tower Blowdown) will be discharged to common effluent channel of M/s Vadodara Enviro Channel Limited (VECL) for final discharge at sea. 219.6 KLD (8 KLD washing wastewater and 211.6 KLD Cooling Tower / DMW Unit blowdown from SA-V plant) will be reused in Phosphoric Acid plant. 3456 KLD condensate & 108 KLD RO treated water (150 KLD effluent generated from

AS-IV Cooling tower blow down will be recycled to Melamine-III RO plant and from which 108 KLD RO treated water will be generated) will be reused in cooling and boiler purposes. 741.8 KLD process effluent being generated from Urea, Melamine -I/II, AS-I & II will be again directly discharged to Phosphoric Acid Plant. Total domestic wastewater from the complex will be 3622.1KLD (Industrial Domestic Sewage: 453.7 KLD; Township Domestic Waste: 3168.4 KLD). Domestic sewage will be treated in Sewage Treatment Plant and treated water will be reused for horticultural purposes. Under LBCN project, there will be no wastewater generation as water generated will be consumed in product. 0.6 KLD domestic sewage will be treated as per existing practices i.e., treatment in STP & reused for horticultural purposes. Total wastewater generated from project after expansion will be 17259.7 KLD (Industrial Effluent-13637 KLD; Domestic Sewage- 3622.7 KLD). Industrial Effluent will be reused to maximum extent and rest will be discharged to common effluent channel of M/s Vadodara Enviro Channel Limited (VECL) for final discharge at sea. Domestic sewage will be treated in Sewage Treatment Plant. In addition to STP, existing oxidation pond of capacity 20,000 cum will be utilized for collection & way forward treatment to cater the additional load from industrial domestic and proposed expansion.

13. The existing connected load of power is 157 MW. The power requirement of the complex as per latest EC & CTE will be 81.55 MWPD. There are a few DG sets installed within the plant for backup purposes. For the proposed LBCN Project, additional 0.11 MWPD will be required. Total power requirement of the plant after expansion will be 81.66 MWPD. The power requirement for GSFC Complex is being sourced from WindMill /Cogeneration Plant/MGVCL. GSFC has installed 152.8 MW Wind Farm in Kucchh & Saurashtra region, the same is utilized in Baroda & Sikka Unit. Solar Power Plant of 10 MW is executed at Charanka, Patan. The operation of Co-Generation Plants at GSFC is dependent on the steam & power demand (requirement) of the complex, NG availability

14. **Details of Process Emissions Generation and its Management:** For existing components in the facility, appropriate APCM (Water Scrubber, Demister Pads, Mist Eliminator & Candle Filter, Dust Cyclone, H_2SO_4 Scrubber, Ventury Scrubber & Bag Filter, Fume scrubber, Cyclone Separator, Final Absorption Tower, De NOx unit) have been installed to control probable emissions of PM, SO_2, NOx, NH_3, F, Acid Mist etc). Under the proposed LBCN Project, there will be no gaseous emissions from the project. However, there will be generation of minor amounts of CO_2 emission during mixing of calcium carbonate, nitric acid, and water in reactor. Considering that CO_2 generation in LBCN Plant is very less i.e., 682 kg/day and not on a continuous basis, it is not cost effective to capture and treat the CO_2 generated. Fugitive emissions will be controlled by improvising control measures and housekeeping related practices.

Details of Existing Flue Gas Stacks at GSFC

Sr. No	Plant	Stack attached to	Air Pollution Control Device	Stack Height (m)	Parameter	Permissible Limits
1.	Methanol (Conversion	Reformer (Furnace)	-	33	PM SO_2	150 mg/Nm^3 100 ppm

	from Ammonia-I) fa	NG Preheater	-	18	NOx	350 mg/ Nm^3 {As per G.S.R 820 (E)}
2.	Ammonia – III	Reformer (Furnace)	-	30	PM SO_2 NOx	150 mg/Nm^3 100 ppm 400 mg/Nm^3 {As per G.S.R 1607 (E)}
		NG Preheater	-	30		
3.	Ammonia – IV F0101	Reforming Section-100	-	52		
4.	F0501	Syn. Unit-500	-	30	NOx	400 mg/Nm^3 {As per G.S.R 1607 (E)}
5.	F0901	CRG Unit-900	-	30		
6.	F0902	CRG Unit-900	-	30		
7.	Melamine – I 10A-1102	Salt furnace	-	30	PM SO_2 NOx	150 mg/Nm^3 100 ppm 350 mg/Nm^3 {As per G.S.R 820 (E)}
8.	Melamine – II A102	Salt furnace	-	35		
9.	Utility Boiler 4 & 5 (F4)	Boiler O/L ID Fan Disc	-	30	PM SO_2 NOx	150 mg/Nm^3 600 mg/Nm^3 300 mg/Nm^3 {As per S.O. 96 (E)}
10.	Cogeneration – I (F5)	Boiler O/L ID Fan Disc	-	70	PM SO_2 NOx	100 mg/Nm^3 600 mg/Nm^3 600 mg/Nm^3 {As per S.O. 3305 (E)}
11.	Cogeneration – II	Boiler O/L ID Fan Disc	-	70		
12.	Cogeneration – III	Boiler O/L ID Fan Disc	-	35		
13.	Capro – I (F8)	Scrubber of Waste Liquor Combustion Unit	Water scrubber	22	PM SO_2 NOx	150 mg/Nm^3 100 ppm 400 mg/Nm^3 {As per G.S.R 481(E)}
14.	Capro – II (F9)	ESP of IWI Unit	ESP	40		
15.	New CVL Boiler (F10)	New Boiler	-	70	PM SO_2 NOx	150 mg/Nm^3 600 mg/Nm^3 300 mg/Nm^3 {As per S.O. 96 (E)}
16.	Melamine – III (F11)	Gas Fired Heater	-	30	PM SO_2 NOx	150 mg/Nm^3 100 ppm 250 mg/Nm^3 {As per G.S.R

						820 (E)}
17.		DG Set (3000 kVA)	Acoustic Measures	1.5	PM SO_2 NOx	75 mg/Nm^3 100 ppm 710 ppm {As per G.S.R 489 (E)}
18.	Sulphuric Acid-IV Plant	Start-up Scrubber (Caustic Scrubber)	Demister Pad	68	-	-
		Final Absorption Tower	Mist Eliminator and Candle Filter		-	-
		DG Sets	Stack Height	11.4	PM SO_2 NOx	75 mg/Nm^3 100 ppm 710 ppm {As per G.S.R 489 (E)}

Details of Existing Process Gas Stacks at GSFC

Sl. No	Plant	Stack attached to	Stack Height (m)	APC Device	Parameter	Permissible Limit
1.	Urea – I (P1)	Prilling Tower	38	Water Scrubber	PM NH_3	2 kg/T of Urea 175 mg/Nm^3
2.	Urea – II (P2)	Prilling Tower	70	Water Scrubber	PM NH_3	2 kg/T of Urea 175 mg/Nm^3
3.	Urea –Mel (Urea ECS) (P3)	Condenser oxidation column	38	H_2SO_4 Scrubber	NH_3	175 mg/Nm^3
4.	Melamine – I (P4)	Dryer Outlet	15	Filter	PM NH_3	150 mg/Nm^3 175 mg/Nm^3
5.	Melamine – II (P5)	Dryer Outlet	17	Filter	PM NH_3	150 mg/Nm^3 175 mg/Nm^3
6.	Phosphoric Acid (P6)	Rock Grinding Mill	30	Ventury Scrubber & Bag Filter	PM	150 mg/Nm^3
7.	Phosphoric Acid (P7)	Digester	20	Fume scrubber	F	25 mg/Nm^3

8.	DAP/APS/MAP/ NPK (P8. P9)	Dryer & Dust Scrubber A Train & B Train	30	Cyclone separator & Ventury scrubber	PM NH_3	150 mg/Nm^3 175 mg/Nm^3
9.	DAP/APS/MAP/ NPK (P10, P11)	Granulator & Neutralizatio n A Train & B Train	25	Fume Scrubber	F NH_3	25 mg/Nm^3 175 mg/Nm^3
10.	AS-II (P12)	Dryer Outlet	19.2	Cyclone Separator	PM	150 mg/Nm^3
11.	SA-III (P13)	Final Absorption Tower	52	Final Absorptio n Tower	SO_2 Acid Mist	2 kg/MT of SA 50 mg/Nm^3
12.	SA-IV (P14)	Final Absorption Tower	100	Final Absorptio n tower	SO2 Acid Mist	2 kg/MT of SA 50 mg/Nm^3
13.	Capro-I (P15)	D-415-3 Tower O/L	25	Scrubber	SO_2 NH_3	40 mg/Nm^3 175 mg/Nm^3
14.	Capro-I (P16)	D-414-3 Tower O/L	25	De NOx unit	NOx NH_3	300 mg/Nm^3 175 mg/Nm^3
15.	Capro-II (P17)	AS Dryer	30	Cyclone Separator & Scrubber	PM	150 mg/Nm^3
16.	Capro-II (P18)	AS Vent	30	Scrubber	SO_2 NH_3	40 mg/Nm^3 175 mg/Nm^3
17.	New Nylon 6 Plant (P19)	Process Vessels	30	Scrubber	PM	150 mg/Nm^3
18.	WSF & MM Plant (P20)	Blenders	40	Bag Filter	PM SO_2 NOx	150 mg/Nm^3 100 ppm 50 ppm
19.	SAG, SAL (P21)	Vibro-feeder packing & handling unit	12.2	Bag Filter	PM	150 mg/Nm^3
20.	Melamine – III (P22)	Vent Scrubber	23	Ammonia Scrubber	NH_3	175 mg/Nm^3
21.	Melamine – III (P23)	Melamine pneumatic transport system	15	Bag Filter	PM	150 mg/Nm^3
22.	Melamine – III	Melamine	30	Wet	PM	150 mg/Nm^3

	(P24)	Dryer MP Absorber LP Absorber		Scrubber	SO_2 NOx NH_3	100 ppm 350 mg/Nm^3 175 mg/Nm^3
23.	AS-I (P25)	Dryer	21	Dust cyclone	PM	150 mg/Nm^3
24.	S90 WDmG (P26)	Spray Drying System	18	Cyclone followed by Ventury Scrubber	PM	150 mg/Nm^3
25.	Gypsum Granulation Plant	Dryer & Hot Air Gas Generator	30	Cyclone Separators	PM	<150 mg/Nm^3

15. **Details of Solid Waste/ Hazardous Waste Generation and its Management:** Industrial hazardous wastes such as spent oil, discarded containers etc. are being sent to TSDF site/registered recycler. Authorization under Hazardous Waste Management Rules has been obtained from GPCB. Wastes are dried, packed and stored in separate designated hazardous waste storage facility with pucca bottom and leachate collection facility before its disposal. GSFC strictly complies with the rules and regulations with regards to handling and disposal of hazardous waste in accordance with Hazardous & Other Waste (Management and Transboundary Movement) Amendment Rules, 2022. Hazardous wastes are being disposed of to M/s Nandesari Environment Control Limited (NECL)/ Safe Enviro Project/ BEIL/ M/s Saurashtra Enviro Project Pvt. Ltd. (SEPPL), Kutch TSDF/Incineration facility. Under the proposed project, there will be no generation of hazardous waste. However, 17 kg/day of silica generated from the process of LBCN will be reused as filler within the premises. Total Solid Waste Generation from the project will be 4960 kg/day which will be segregated in Biodegradable Waste and Non-Biodegradable Waste. Biodegradable waste will be treated in composting bins and reused as manure in landscaping. Recyclable Waste will be sent to GPCB authorized recyclers. The total solid waste generation will be 4968 kg/day that will be segregated and disposed as per existing protocols.

Management of Hazardous & Non-Hazardous Waste

Sr. No	**Name of Waste**	**Hazardous Waste Category**	**Quantity**			**Method of Collection/ Storage**	**Method of Disposal**
			As per Latest EC & CTE	**Proposed**	**Total after Expansion**		
1	Chemical sludge from Wastewater treatment plant	Sch-1/35.3	40 MT/Year			Generated during cleaning of tank/pond, packed in HDPE bags	Collection, storage, transportation, and disposal at approved TSDF sites of

					M/s Nandesari Environment Control Limited (NECL)/ M/s Safe Enviro Project/BEIL/ M/s Saurashtra Enviro Project Pvt. Ltd. (SEPPL), Kutch.
2	Used Oil	Sch-1/5.1	250 MT/Year	Drums/Tanks in Room	Collection, storage, transportation, and Sale to registered re-refiner
3	Discarded Containers	Sch-1/33.3	10,000 Nos./Year	Storage Yard	Collection, storage, transportation, and Sale Vendor
4	Spent Catalyst (Acidic)	Sch-1/17.2	66.35 MT/Year	Drums in Room	Dispose at TSDF/ Sell to register recycler
5	Spent Catalyst (Alkaline)	Sch-1/18.1	275 MT/Year	Drums in Room	Collection, storage, transportation, and Sale register recycler
6	Organic Waste	Sch-1/1.4	20 MT/Year	Drums/Bags stored in Room	Collection, storage, transportation Dispose at NECL's /SEPPL's incineration facility
7	Sulphur Muck**	Sch-1/17.1	530 MT/Year	Stored in the yards	Reuse by mixing with phosphogypsum or Filler in

							Product.
8	Spent Resin	Sch-1/34.2	80 MT/Year			Bags	Collection, storage, transportation, and Disposal at CHWIF/ Co-processing site
9	Insulation waste	Sch-1/24.1	75 MT/Year			Bags	Collection, storage, transportation, and Disposal at TSDF
10	Contaminated cotton rags & other cleaning material	Sch-1/33.2	5 MT/Year			Bags	Collection, storage, transportation, and Disposal at CHWIF/ Co-processing site
11	Carbon Residue	Sch-1/35.3	7.7 MT/year			Bags	Collection, storage, transportation, and Disposal at authorized TSDF site.
12	Molten Salt (consisting of KNO3, $NaNO_3$ & $NaNO_2$)	Sch-1/1.1	66 MT (in 7 years)			Bags	Collection, storage, transportation, and Reuse and/or disposal at authorized TSDF Site.
13	High Boiling Hydrocarbon	Sch-1/18.2	8.25 MT in a span of 7 years			Drums	Disposal at secured landfill site of Bharuch Enviro Infrastructure Ltd. (BEIL)/Common Hazardous Waste Incinerator.
NON-HAZARDOUS WASTE							
1	Silica	-	0	6.205 MTPA	6.205 MTPA	Drums	Reuse as Filler.
SOLID WASTE							

1	Phospho-gypsum***	-----	2,53,260 MT/Year	--	2,53,260 MT/Year	Stored in the yards	Sold to Farmers as Soil conditioner thru authorized dealers.
2	Nylon Solid Waste		100 Kg/Day		100 Kg/Day	Stored in Plant	Sold to Vendor
3	Bio-sludge from ETP	----	50 MT/year	-	50 MT/year	Bio sludge dried on Sludge Drying Bed	Given to farmers for use as manure
4	Ash from Bio-briquette consumption in HAGG (GG Unit)	-	0.24 MTPD	0	0.24 MTPD	Stored in Plant	Ash will be utilized in gypsum granulation as filler material.
All the Hazardous wastes are stored on impervious floor having roof, boundary wall. Discarded containers are thoroughly cleaned / decontaminated before disposal. ***** GroundSulphur Muck is being reused by mixing with Phosphogypsum.*** ****** Phosphogypsum is excluded from the Hazardous Waste Category as per amended rule 2008 and it is being sold to farmers as soil conditioner.***							

16. The industry had contributed approx. 394.1 Lakhs in the previous financial year for environment management and control. Since LBCN Plant is a part of existing GSFC complex, all environment management plans shall be continued as per present practices in the complex. Industry proposes to allocate Rs. 21.58 for activities to be taken under Corporate Social Responsibility for 2023-24. The activities undertaken by GSFC are R&D fundings & infrastructural developments in GSFC University, Funding for education and co-curricular activities in GSFC supported schools at BU, FU & SU, Rural development projects, drinking water facilities etc. The activity like cleaning of nearby village ponds can be taken up as CER.

17. The PP reported that the total land area is 3280000 m^2 (328 Hectares). Recently, 0.65 Ha. of area has been diverted for Bullet Train Project to Government of Gujarat. The net plot area of the project is 327.35 Ha. The proposed expansion will be set up over 945 sqm area within existing premises of GSFC Complex. Approx. 133.35 Ha. (40.73% of plot area) of green area has been developed by GSFC in accordance with MoEF&CC vide F.No. 22-23/2018-IA.III (Pt) dated 31st October,2019. Out of total green area, 125.89 Ha. has been developed within GSFC Vadodara Complex and 7.46 Ha. has been developed in GSFC owned land in Ranoli, Vadodara located 3.63 km, NW away from the project. The industry has put serious efforts in terms of selection of tree species within the areas.

18. The PP reported that the GSFC Complex being a Notified Area by Industries, Mines and Energy Department vide Notification No. GU-87-46-GID-1086(I) 2338 dated 21.08.1987,

the project is exempted from Public Hearing as per clause 7 (i) (III) of EIA notification 2006 & OM J-11011/321/2016-IA. II(I) dated 27.04.2018.

19. The PP proposed to set up an Environment Management Cell (EMC) by engaging SVP (OC (U&EC) – Sr. VP (I& MB, U&EC- Chief- Manager (Shift incharge)- Supervisiors-workmanfor the functioning of EMC.

20. The PP reported that from proposed additional plantation, the unit would be able to sequester approximately 3922.25 MT. (considering the growth of trees is minimum 10 years).

21. The PP submitted the Disaster Management Plan and On-site and Off-site Emergency Plans in the EIA report.

22. The Total cost for proposed expansion is ₹ 0.5 Crores. Total employment will be 5645 (Permanent Employees: 3116, Contract Employee and Executive Trainee: 166 and Contract Labours: 2363) after expansion**.**

23. **Deliberations by the EAC:**

The EAC constituted under the provisions of the EIA Notification, 2006 comprising expert members /domain experts in various fields, examined the proposal submitted by the PP in desired format along with the EIA/EMP reports prepared and submitted by the Consultant accredited by the QCI/ NABET on behalf of the PP.

The EAC noted that the PP has given an undertaking that the data and information given in the application and enclosures are true to the best of his knowledge and belief and no information has been suppressed in the EIA/EMP reports. If any part of data/information submitted is found to be false/ misleading at any stage, the project will be rejected and Environmental Clearance given, if any, will be revoked at the risk and cost of the PP.

The EAC noted that the EIA reports are in compliance with the ToR issued for the project, reflecting the present environmental status and the projected scenario for all the environmental components. The EAC deliberated on the proposed mitigation measures towards Air, Water, Noise and Soil pollutions. The EAC advised that the storage of toxic/explosive raw materials/products shall be undertaken with utmost precautions and following the safety norms and best practices.

The EAC inter-alia, deliberated on the STP and advised the PP to submit the details of STP including the capacity.

The PP submitted the above information/document and the EAC found these to be satisfactory.

The EAC deliberated on the Onsite and Offsite Emergency plans and various mitigation measures to be proposed during the implementation also of the project and advised the PP to implement the provisions of the Rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

The EAC deliberated on the proposal with due diligence in the process as notified under the provisions of the EIA Notification, 2006, as amended from time to time and accordingly made the recommendations to the proposal. The expert members of the EAC found the proposal in order and recommended for grant of environmental clearance.

The EAC is of the view that its recommendation and grant of environmental clearance by the regulatory authority to the project/activity is strictly under the provisions of the EIA Notification 2006 and its subsequent amendments. It does not tantamount/construe to approvals/consent/permissions etc. required to be obtained or standards/conditions to be followed under any other Acts/ Rules/ Subordinate legislations, etc., as may be applicable to the project. The PP shall obtain necessary permission as mandated under the Water (Prevention and Control of Pollution) Act, 1974 and the Air (Prevention and Control of Pollution) Act, 1981, as applicable from time to time, from the State Pollution Control Board, prior to construction & operation of the project.

24. The EAC, after detailed deliberations, **recommended the project for the grant of environmental clearance, subject to the compliance of the terms and conditions as under, and general terms and conditions in Annexure-I**:

i) Adequate stack height as per CPCB/SPCB guidelines shall be provided. Stack emission levels shall be stringent than the existing standards.

(ii) CEMS shall be installed and connected to SPCB/CPCB Servers.

(iii) Effective fugitive emission control measures shall be adopted in the process, transportation, packing etc.

(iv) Transportation of materials by rail/conveyor belt, wherever feasible, shall be explored.

(v) As proposed, Natural gas shall be used as a primary fuel, fuels like LSHS (Low Sulphur Heavy Stock), Hydrocarbon Fuel & High-Speed Diesel (HSD) shall be used as per requirements of the equipments.

(vi) The best available technology shall be used.

(vii) The PP shall develop/mainatin greenbelt over an area of 40 % within premises within a year of the grant of EC. The saplings selected for the plantation should be of sufficient height, preferably 6-ft. The budget earmarked for the plantation shall be kept in a separate account and should be audited annually. The PP should annually submit the audited statement along with proof of activities viz. photographs (before & after with geo-location date & time),

details of expert agency engaged, details of species planted, number of species planted, survival rate, density of plantation etc. to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during previous year.

(viii) The PP shall also develop/ maintain avenue plantationover an area of 7.46 Ha. in GSFC owned land in Ranoli, Vadodara located 3.63 km, NW away from the project.

(ix) The transportation load on roads shall be within their carrying capacity and adequate width of roads shall be maintained inside the industrial premises.

(x) There shall be no wastewater generation as water generated shall be consumed in product. 0.6 KLD domestic sewage shall be treated as per existing practices i.e., treatment in STP & reused for horticultural purposes. Total wastewater generated from project after expansion shall be 17259.7 KLD (Industrial Effluent-13637 KLD; Domestic Sewage- 3622.7 KLD). Industrial Effluent shall be reused to maximum extent and rest shall be discharged to common effluent channel of M/s Vadodara Enviro Channel Limited (VECL) for final discharge at sea.

(xi) Continuous monitoring system for checking effluent quality/quantity shall be installed in the Unit.

(xii) GSFC shall construct/ maintain 15 no. of rainwater harvesting structures (Recharge well and Furrat System) across the complex.

(xiii) Effluent like washing wastewater & Cooling Tower/DMW Blowdown shall be reused in Phosphoric Acid Plant, Process Condensate & RO treated water shall be reused and recycled to other industrial units for cooling and boiler purposes. Industrial effluent shall be reused/recycles to maximum extent and rest shall be treated in ETP & further discharge to VECL Channel for final disposal at sea.

(xiv) Domestic sewage shall be treated in Sewage Treatment Plant. In addition to STP, existing oxidation pond of capacity 20,000 cum shall be utilized for collection & way forward treatment to cater the additional load from industrial domestic and proposed expansion.

(xv) Dumping of waste (fly ash, slag, red mud, etc.) shall be permitted only at designated locations approved by SPCBs/ PCCs

(xvi) Spent oil, discarded containers etc. shall be sent to TSDF site/registered recycler. Authorization under Hazardous Waste Management Rules has been obtained from GPCB vide CCA Order No. AWH-117101 dated 15.02.2022 (valid till 30.09.2028). Hazardous wastes like chemical sludge from wastewater treatment plants, Spent Catalyst, Organic Waste, Spent Resin, Contaminated Cotton Rags, Carbon Residue, Molten Salt etc. shall be disposed off to TSDF/CHWIF Sites. Used oil and discarded containers shall be sold to registered recycler. No hazardous waste shall be generated. However, 17 kg/day of silica generated from process of LBCN Plant shall be reused as filler within the premises.

(xvii) Monitoring of the compliance of EC conditions shall be submitted with third party audit every year.

(xviii) An amount of ₹ 21.58 Crores shall be allocated towards CER.

(xix) A separate Environmental Management Cell (having qualified persons with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions by engaging SVP (OC (U&EC) – Sr. VP (I& MB, U&EC- Chief-Manager (Shift incharge)- Supervisiors- workman. In addition to this, one safety & health officer as per the qualification given in Factories Act, 1948 shall be engaged within a month of grant of EC. The PP should annually submit the audited statement of amount spent towards the engagement of qualified persons in EMC along with details of person engaged to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xx) The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP in respect of environmental management, and risk mitigation measures relating to the project shall be implemented. The budget proposed under EMP Rs.394.1 Lakhs in the previous financial year for environment management and control and same shall be kept in a separate account and should be audited annually. The PP should submit the annual audited statement along with proof of implementation of activities proposed under EMP duly supported by photographs (before & after with geo-location date & time) and other document as applicable to the Regional Office of MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xxi) The total water requirement shall not exceed 3.33 KLD. Out of which, 1.13 KLD freshwater shall be met by existing freshwater sources. The rest of the requirements shall be met by reusing 2.2 MTPD steam condensate within the project. 2.2 MTPD steam shall be used as a utility. Total water requirement after expansion shall be 44056.41 KLD. The PP shall ensure that water supply should not be above the permissible limit and fresh water shall be withdrawn only after obtaining requisite permission from Concerned Authority. The PP should submit the details of utilization to the Integrated Regional Office (IRO), MoEF&CC before 1st July of every year for the activities carried out during the previous year.

(xxii) No banned chemicals shall be manufactured by the PP. No banned raw materials shall be used in the unit. The PP shall adhere to the notifications/guidelines of the Government in this regard.

(xxiii) The PP shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xxiv) The project proponent shall comply with the environment norms for Chemical Fertlizer Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 1607 (E), dated 29.12.2017 under the provisions of the Environment (Protection) Rules, 1986.

(xxv) All necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The PP shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xxvi) The volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97 % with effective chillers/modern technology. Regular monitoring of VOCs shall be carried out.

(xxvii) The PP shall explore possibilities for recycling and reusing of treated water in the unit to reduce the fresh water demand and waste disposal.

(xxviii) Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB servers. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xxix) The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Regional Office of Ministry and SPCB along with the compliance report.

(xxx) The occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xxxi) Training shall be imparted to all employees on safety and health aspects for handling chemicals. Safety and visual reality training shall be provided to employees. Action plan for mitigation measures shall be properly implemented based on the safety and risk assessment studies.

(xxxii) The unit shall make the arrangement for the protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxxiii) The solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The

solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xxxiv) The storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxxv) The PP shall undertake waste minimization measures as below (a) Metering and control of quantities of active ingredients to minimize waste; (b) Reuse of by-products from the process as raw materials or as raw material substitutes in other processes. (c) Use of automated filling to minimize spillage. (d) Use of Close Feed system into batch reactors. (e) Venting equipment through vapor recovery system. (f) Use of high pressure-hoses for equipment cleaning to reduce wastewater generation.

Agenda No. 66.9

Proposed expansion for manufacturing of Synthetic Organic Chemicals with production capacity from 660 MT/Month to 1550 MT/Month and inorganic pigments from 3547 Mt/ Month to 3367 Mt/ Month located at Plot No. 53/B & C/B, GIDC-Estate, Nandesari, Taluka & District Vadodara, Gujarat by M/s. Narayan Organics Pvt. Ltd. - Consideration of ToR

[Proposal No. IA/GJ/IND3/443747/2023; File No. IA-J-11011/99/2020-IA-II(I)

1. The proposal is for the issue of ToR for preparation of EIA/EMP for the Proposed expansion for manufacturing of Synthetic Organic Chemicals with production capacity from 660 MT/Month to 1550 MT/Month and inorganic pigments from 3547 Mt/ Month to 3367 Mt/ Month located at Plot No. 53/B & C/B, GIDC-Estate, Nandesari, Taluka & District Vadodara, Gujarat by M/s. Narayan Organics Pvt. Ltd. **The PP reported that the project is located in a Critically Polluted Area (CPA) as identified by the CPCB.**

2. The project/activity is covered under Category 'B' of Item 5(f) synthetic organic chemicals of the schedule to the EIA Notification, 2006. However, since the project site is located within a **Critically Polluted Area,** the project attracts the general condition and considered as Category 'A' at Centre.

3. The PP applied for the ToR vide proposal number No. **IA/GJ/IND3/443747/2023** dated 24.8.2023. The proposal is now placed in the 66th EAC meeting held on 26th September, 2023, wherein the PP made a detailed presentation on the salient features of the project. The information submitted by the PP is as follows:

4. The PP reported the product details are as follows:

Sr. No.	Product Name	CAS No./ CI No.	Quantity in MT/ Month As per EC	Quantity in MT/ Month as per CCA	Proposed Increased/ Decreased quantity in MT/ Month compare to EC	Quantity in MT/ Month After EC Expansion	End use of project
ORGANIC PRODUCTS							
1.	Pigment Green 7 /36 (CPC Green)	1328-53-6/74260	250	250	0	250	Coloring agent for Paints/Inks/plastic/Rubber/textile
2.	Pigment Alpha Blue (PB150/151/15 2)	147-14-8/ 74160	100	00	-100	00	Coloring agent for Paints/Inks/plastic/Rubber/textile
3.	Pigment Beta Blue (PB 15 3/15 4)	147-14-8/ 74160	200	200	0	200	Coloring agent for Paints/Inks/plastic/Rubber/textile
4.	Pigment Violet 23	215247-95-3 / 51319	10	00	-10	00	Coloring agent for Paints/Inks/plastic/Rubber/textile
5.	AZO Pigments (Red/Yellow/ Orange)	----	100	00	-100	00	Coloring agent for Paints/Inks/plastic/Rubber/textile
COUPLERS							

6.	Naphthol AS **EITHER/OR**	92-77-3	00	00			Pigment Intermediates
7.	Naphthol ASBS **EITHER/OR**	135-65-9	00	00			
8.	Naphthol ASBO **EITHER/OR**	132-68-3	00	00			
9.	Naphthol ASD **EITHER/OR**	135-61-5	00	00			
10.	Naphthol ASOL **EITHER/OR**	135-62-6	00	00	+100	100	
11.	Naphthol ASE **EITHER/OR**	92-78-4	00	00			
12.	Naphthol ASSW **EITHER/OR**	--	00	00			
13.	Naphthol ASPH **EITHER/OR**	92-74-0	00	00			
14.	Naphthol ASCL **EITHER/OR**	137-52-0	00	00			

15.	Naphthol ASTR	--	00	00			
16.	CLT ACID **EITHER/OR**	88-53-9	00	00	+150	150	As Pigments Intermediates / Dyes Intermediates
17.	2B Acid / 4 B Acid **EITHER/OR**	88-51-7 / 88-44-8	00	00			
18.	Chloranil	118-75-2	00	00			
19.	Benzyl Alcohol	100-51-6	00	00	+500	500	Pharmaceuticals, Fragrances and Flavors, & Personal Care Products
20.	Ortho/Meta/ Para Chloro Benzyl Alcohol	100-44-7	00	00			
21.	Benzylidine Acetone	122-57-6	00	00			
22.	Benzyl Chloride **EITHER/OR**	100-44-7	00	00			Perfumery & Dyes
23.	Ortho/Meta/ Para Chloro Benzyl Chloride **EITHER/OR**	611-19-8	00	00			
24.	2-Methyl Benzyl Chloride (2-Chloro Ortho Xylene) **EITHER/O**	552-45-4	00	00			

	R						
25.	Dichloro Ortho Xylene (2,2-Dichloro Ortho Xylene) **EITHER/OR**	612-12-4	00	00			
26.	2,4-Dichloro Benzyl Chloride	94-99-5	00	00			
27.	Benzaldehyde **EITHER/OR**	100-52-7	00	00			
28.	Ortho/Meta/Para Chloro Benzaldehyde **EITHER/OR**	89-98-5	00	00			
29.	2,4-Dichloro Benzaldehyde	874-42-0	00	00			
30.	n-Pentyl Chloride **EITHER/OR**	543-59-9	00	00	+200	200	Perfumery & Pharmaceuticals
31.	n-Butyl Chloride **EITHER/OR**	109-69-3	00	00			
32.	n-Hexyl Chloride	544-10-5	00	00			

	EITHER/OR						
33.	1,6-Dichloro Hexane	2163-00-0	00	00			
34.	Tri Butyl Phosphate (TBPO) **EITHER/OR**	126-73-8	00	00	+150	150	Plasticizer / Flame Retardant
35.	Tri Iso-Butyl Phosphate (TIBPO) **EITHER/OR**	126-71-6	00	00			
36.	Tri Octyl Phosphate (TOPO)	78-42-2	00	00			
A. Organic Pigments			**660**	**450**	**890**	**1550**	--
B. Inorganic Pigments							
37.	Poly Aluminum Chloride Solution	1327-41-9	3127	3127	0	3127	As Flocculant in Waste water treatment plant
38.	Aluminum Hydroxide	21645-51-2	175	175	-175	0	Pharmaceutical & chemical flame retardant
39.	Boehmite	1318-23-6	175	0	-175	0	Paint, Refinery and Polymer
40.	Copper Sulphate	7758-98-7	70	0	0	70	Used in Chemical Industry
41.	Ammonium sulfate	7783-20-2	0	0	+170	170	Soil conditioning agent
B. In-organic Pigments			**3547**	**3302**	**-180**	**3367**	

5. The PP reported that the existing land area is is 7102.83 m^2, no additional land will be requirted for the proposed expansion.

6. The PP reported that there are no National Parks, Wildlife Sanctuaries, Biosphere Reserves, Tiger/Elephant Reserves, Wildlife Corridors etc. within 10 km distance from the project site. Mahi River is flowing at a distance of 2.11 km in W direction.

7. The PP reported that the Total water requirement is 654 m^3/day of which fresh water requirement of 446 m^3/day will be met from GIDC Supply and rest 208 m^3/day is recycled water. Effluent of 362 m^3/day quantity will be treated through ETP and then 200 m^3/day will be sent to CETP of M/s. NIA, Nandesari for the final disposal. Remaining 162 m^3/day will be subjected to RO & MEE.

8. Power requirement after expansion will be 2500 KVA and will be met from Madhya Gujarat Vij Company Limited (MGVCL). Existing unit has 1 No. of DG sets (1000 KVA) capacity, as standby during power failure. Stack (height 11 m) has been provided as per CPCB norms to the proposed DG sets.

9. Existing unit has 5 TPH & 2 TPH coal fired boiler. The unit has provided Multi cyclone separator + Bag filter + Water scrubber as an APCM for controlling the particulate emissions within the statutory limit of 120 mg/Nm3 for the boilers.

10. The PP reported that the project, being located in **notified industrial area (Notification No.GHU/75/36/GID 1974/4084 (I) CH dated 06.05.1975), is exempted from the public hearing** as per the Ministry's O.M. J-11011/321/2016-IA. II(I) dated 27.04.2018.

11. Industry has already developed greenbelt over an area of 42 % i.e. 2989 m^2 out of total area of the project.

12. The estimated project cost is Rs. 10 Crore. The PP reported that total Additional Employment will be 10 persons as direct & 20 persons indirect.

13. **Deliberations by the EAC:**

The EAC inter-alia, deliberated on the stay order regarding the stay on the order passed by the Hon'ble NGT dated 10.7.2019, 23.8.2019, 14.11.2019, fuel, Greenbelt development plan, water balance and advised the PP to submit the following:

- Stay on the order passed by the Hon'ble NGT dated 10.7.2019, 23.8.2019, 14.11.2019
- Action plan for the use of cleaner fuel.
- Action plan for the Greenbelt development (20% withinh the premises).
- Revised water balance.

The PP submitted the above information/documents and the EAC found these to be satisfactory.

14. After detailed deliberations, the EAC **recommended** the project for grant of ToR (**Standard ToR [Annexure-II]** and **additional ToR as mentioned below)**, **without public hearing** as per the provisions of the EIA Notification, 2006 and as per O.M. No. 22-23/2018-IA.III dated 05.07.2022.

(i) The status of the action plan, if any, prepared by the State Government/SPCB for the CPA needs to be provided.

(ii) The PP needs to submit the action plan with respect to mitigation measures for CPA mentioned in the Ministry's O.M dated 31.10.2019.

(iii) Being in a Critically Polluted Area (CPA), the PP need to submit alternative site analysis and Environmental Cost Benefit analysis in the EIA report.

(iv) The PP shall submit the details of carbon foot prints and carbon sequestration study w.r.t. the proposed project. The Action Plan for utilization of modern technologies for capturing carbon emitted and developing carbon sink/carbon sequestration resources shall also be prepared and submitted.

(v) The PP should submit the photographs of monitoring stations & sampling locations. The photograph should bear the date, time, latitude & longitude of the monitoring station/sampling location. In addition to this, the PP should submit the original test reports and certificates of the labs which have analysed the samples.

(vi) Details of Onsite and Offsite emergency plans as per the provisions of the MSIHC Rules need to be submitted.

(vii) Activity-wise, a time bound action plan along with budgetary provisions for occupational health & surveillance, environment management plan, and green belt development plans shall be prepared and submitted.

(viii) Undertaking from the PP and the consultant in pursuant to the O.M. No. J-11013/41/2006-IA. II(I) dated 04.08.2009 and J-11013/41/2006-IA. II(I) dated 5.10.2011.

(ix) The PP shall submit an undertaking to the effect that the project is not a violation proposal in pursuant to the S.O. 804(E) dated 14.03.2017 and SoP dated 07.07.2021.

(x) Action Plan for the management of hazardous waste and provision for its utilization in co-processing if applicable shall be prepared and submitted.

(xi) Provision for reuse/recycle of treated wastewater, wherever feasible shall be made. The PP shall explore the possibilities for recycling and reusing of treated water in the unit to

reduce the fresh water demand and waste disposal. A detailed water harvesting plan also needs to be prepared and submitted. Provision for Zero Liquid Discharge whenever techno-economically feasible shall be included. The PP shall make necessary provisions for continuous monitoring of the effluent quality/quantity.

(xii) Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains in constructed reservoirs. The rain water shall not be put into groundwater strata.

(xiii) The PP shall clarify whether project involves ground water utilization. In case of ground water abstraction, a copy of application made to concerned authorities for the same need to be submitted.

(xiv) The PP shall explore the possibility for the use of cleaner fuel.

(xv) The PP should develop Greenbelt over an area of 40 % m^2 (20% within the premises + 20% outside premises (within GIDC). 2500 trees/ha (with 80% survival rate) number of saplings selected for greenbelt should have greater ecological value and should be of great utility value to the local population with emphasis on local and native species and the species which are tolerant to air pollution.

(xvi) Plan for development of the green belt outside the project premises such as avenue plantation, plantation in vacant areas, social forestry, etc. shall be prepared and submitted.

(xvii) Assessment of the carrying capacity of transportation load on roads inside the notified industrial premises shall be carried out and submitted.

(xviii) In addition to the above, the EIA/EMP report shall also address issues such as i) Effective fugitive emission control measures for process, transportation, packing etc. ii) use of cleaner fuels, and iii) best available technology for the plant.

Agenda No. 66.10

Setting up of pesticides and pesticide specific intermediates & Synthetic Organic Chemicals manufacturing plant with total production capacity 431161 TPA, Co product 10480 TPA and CPP of 4.9 MW capacity located at Plot no. 41/1 & 41/2, GIDC Notified Industrial Estate, Jhagadia, District Bharuch, Gujarat by M/s Aarti Industries Limited - Merging of two Environmental Clearances (Re-consideration)

[Proposal No. IA/GJ/IND3/291239/2022; File No. IA-J-11011/458/2021-IA-II(I)]

1. The proposal was recommended by the EAC in its 47th EAC meeting held during 15th-17th February, 2023. Subsequently, Ministry sought the following information during the processing of file and PP submitted the information for the same. Accordingly, the proposal is placed in this 66th EAC meeting held on 26th September, 2023.

2. The project proponent submitted the information with the details are as under;

<table>
<tr><th>S. no.</th><th>Queries Raised by Ministry</th><th>Reply by PP</th></tr>
<tr><td>1.</td><td>Whether the standards to be observed for setting up a pharma Unit or any other such standards are not getting violated and what are the institutional safeguards for ensuring a fool-proof method for storage of raw material, finished products and its transportation so as to ensure that there is no possibility of mixing?</td><td>This is a synthetic organic chemical industry, not a Pharma Unit, but producing raw materials and intermediates for applications in a variety of industries having multiple applications (Colourants, Agro, Pharma, specialty chemicals, plastics, rubber, etc.). Some of the intermediates are common for specialty chemicals, pesticide and pharmaceutical applications. We confirm we are not setting up a pharmaceutical plant, and hence pharma regulations are not applicable. Inadvertently, for a select few products which are actually pharma intermediates, the EC application indicated them as “pharma” and are now amended as “specialty chemicals intermediate/ pharma intermediate”.Refer the following table for revised end use for few products;
<table>
<tr><th>Sr. No.</th><th>Name of Product</th><th>CAS No.</th><th>End Use As per EC</th><th>Revised End Use</th><th>Remark EC No. SEIAA/GUJ/EC/5(f)/1204/2022 dated 17th May 2022</th></tr>
<tr><td>1</td><td>Fluorobenzene (FB)</td><td>462-06-6</td><td>Pharma</td><td>Specialty chemicals intermediate/ pharma intermediate</td><td>Sr. 4 of Group B</td></tr>
</table>
</td></tr>
</table>

2	10,11-Dihydro-5H-dibenz [b,f] azepine (IDB)	494-19-9	Pharma	Specialty chemicals intermediate/ pharma intermediate	Sr. 5 of Group H
3	5H-Dibenz [b,f] azepine (ISB)	256-96-2	Pharma	Specialty chemicals intermediate/ pharma intermediate	Sr. 6 of Group H
4	10-Methoxy-5H-dibenzo [b,f] azepine (10MISB)	4698-11-7	Pharma	Specialty chemicals intermediate/ pharma intermediate	Sr. 7 of Group H

Being a certified Responsible Care (RC logo holder) company, we are following all requisite standards / good manufacturing practices applicable to the products to be manufactured. These products do not fall under the purview of pharmaceutical regulatory requirements.

The products which are pesticide-related will be segregated during production, storage and will follow the prescribed regulations.

For ensuring a fool-proof method for storage of raw material, finished products and its transportation following steps shall be followed

We assure that due care is taken during the project development stage, layout and operation stage as safeguard measures to avoid cross contamination. This will include measures such as;

A. The entire complex comprises individual process blocks separated sufficiently from each other with an optimized layout.

		B. Segregated storage area/tanks for raw materials, solvents, packaging materials and finished goods, C. Segregated utility facilities for cooling water, chilled water and brine. D. Segregated quality control laboratories, manned buildings, E. Hazardous waste will be collected and stored away from the chemical plants. We will dispose of Hazardous waste to the common TSDF facility. F. We will provide a 109793.38 sq meter green belt (27,448 Nos trees) along the periphery as well in between production and utility blocks which will be good isolation between the plants. G. Appropriate precautionary sign boards and labellings will be provided inside the premises and also during the transportation of different categories of products. We will ensure a dedicated vehicle for the transportation for each category of product. H. Proper training is given for Handling, Storage, Transportation and utilization for transport, drivers and end users, as per applicable rules. I. The layout has considered the fool-proof isolation of pesticides from other specialty chemicals manufacturing facilities to avoid cross-contamination.
2.	**What are the onsite and offsite disaster management plans for such combined Units and has the same been finalized?**	Onsite and offsite disaster management plans shall be developed before starting manufacturing activity, the same shall be submitted to the concerned authorities as part of approval for Factory License. For both the units [synthetic organic chemicals (5(f) and pesticides (5(b)] following measures will be put in place during the manufacturing phase Dedicated manpower with separate entry & exits and hygiene facilities. Specific emergency equipment and personnel protective equipment (PPE) for the respective units will be provided. Dedicated facilities will have separate assembly points with evacuation protocol will be defined for each facility. The emergency scenario will be practiced through scheduled mock drills and training for individual facilities. The Occupation Health Center (OHC) will have separate facilities for the dedicated decontamination room and washing facilities. Inspection and checking rooms for the patient will be separate for each facility. The medical protocols will be dedicated to different units and their respective chemicals, adequate emergency medicines and antidotes shall be kept at OHC. Dedicated trained First Aiders will be allocated to individual facilities.

		Security measures: We shall ensure strict security measures to prevent unauthorized access to chemical storage areas and implement security protocols to protect against theft and sabotage. **Community Awareness:** We shall communicate with local emergency services and community organizations to ensure they are aware of the chemicals on-site and can respond appropriately in case of an emergency. **Legal and Regulatory Compliance:** We shall stay compliant with all local, state, and requisite regulations regarding the emergency response, storage, handling, and transportation of hazardous chemicals and regularly update our permits and licenses. We undertake, we will submit the onsite & offsite disaster management plan as part of our half-yearly EC compliance to the authorities.
3.	**Are there any precedence globally or nationally where pharma industry and pesticide industry are co-located with a common Hazard Waste Handling Facility/ common QA/QC facility? Please submit a reply to the above in detail, with supporting documents.**	We are not setting up a pharmaceutical unit; it is a synthetic organic chemicals unit and a pesticides unit. From the database available in the public domain, there are records/permissions which are available on the ministry portal which clearly indicates it is the common industry practice that both the synthetic organic chemicals industry products 5(f) and pesticides 5 (b) are co-existing at a single location following requisite protocols and manufacturing practices. Such precedents and details will be shared with the committee during our presentation. We again reiterate that actions w.r.t. segregation of both these units will be taken care of as mentioned above in s.no. 1 along with segregation for hazard waste and separate QA/QC facilities as may be seen in the layout.

3. **<u>Deliberations by the EAC:</u>**

The EAC constituted under the provisions of the EIA Notification, 2006 and comprising of expert members/domain experts in various fields, examined the proposal submitted by the Project Proponent in desired form.

The EAC inter-alia, deliberated on the similar ECs for co-locating synthetic organic chemicals industry products (5(f)) and pesticides (5(b)), Revised product list along with end use and elaboration regarding product end use and advised the PP to submit the following:

- List of similar ECs for co-locating synthetic organic chemicals industry products (5(f)) and pesticides (5(b)).
- Revised product list along with end use and elaboration regarding product end use.

The PP submitted that, inadvertently, for a select few products which are actually pharma intermediates, the EC application indicated them as "pharma" and are now amended as "specialty chemicals intermediate/ pharma intermediate" , which are as follows:

Sr No.	Name of Product	CAS No.	Earlier As per EC End Use	Revised End Use	Justification
1	Fluorobenzene (FB)	462-06-6	Pharma	Specialty chemicals intermediate/ pharma intermediate	Is an RM for **Rosuvastatin** at N-12 stage Also is an RM for /**Atoravastatin** (for the treatment of dyslipidemia and the prevention of cardiovascular disease), PEEK (Polymer)
2	10,11-Dihydro-5H-dibenz[b,f]azepine (IDB)	494-19-9	Pharma	Specialty chemicals intermediate/ pharma intermediate	IDB is intermediate for the synthesis of **Oxcarbazepine**, (used to treat epilepsy) It is used at N-7 stage
3	5H-Dibenz [b,f] azepine (ISB)	256-96-2	Pharma	Specialty chemicals intermediate/ pharma intermediate	ISB is intermediate for the synthesis of **Oxcarbazepine**, (used to treat epilepsy). It is used at N-6 stage
4	10-Methoxy-5H-dibenzo[b,f]azepine (10MISB)	4698-11-7	Pharma	Specialty chemicals intermediate/ pharma intermediate	MISB is intermediate for the synthesis of **Oxcarbazepine**, (used to treat epilepsy). It is used at N-2 stage
5	1-(3-hydroxyphenyl) ethanone (3 HAP)	121-71-1	Pharma	Specialty chemicals intermediate/ pharma intermediate	3-HAP is an intermediate for **Rivastigmine** (to treat neurodegenerative disease, in patients with Alzheimer and Parkinson disease). It is used at N-5 stag
6	1-(3-aminophenyl) ethanone (3-AAP)	99-03-6	Pharma	Specialty chemicals	3-AAP Is an intermediate for **Pactamycin** (antitumor

Sr No.	Name of Product	CAS No.	Earlier As per EC End Use	Revised End Use	Justification
				intermediate/ pharma intermediate	antibiotic) It is used at N-4 stage)

The PP submitted the above information/ documents and the EAC found it to be satisfactory.

4. After detailed deliberations, the EAC **recommended** the Stipluated Conditions recommended in 47th EAC meeting subject to the following additional conditions:

(i). The individual process blocks shall be separated sufficiently from each other with an optimized layout for keeping the active molecules separated from the inactive intermediates.

(ii). The storage area/tanks for raw materials, solvents, packaging materials and finished goods for pesticides, other chemicals and pharmaceutical intermediate plants shall be adequately segregated.

(iii). The facilities for cooling water, chilled water and brine for pesticides, other chemicals and pharmaceutical intermediate plants shall be adequately segregated.

(iv). The quality control laboratories and buildings for pesticides, other chemicals and pharmaceutical intermediate plants shall be adequately segregated and the manned.

(v). Hazardous waste shall be collected and stored away from the pharmaceutical Intermediate plants and other chemical plants and disposedto the common TSDF facility.

(vi). Treated wastewater shall be recycled only to the utilities of the Pesticide products and shall be monitored for contamination.

(vii). Thick green belt of 109793.38 sq.m (27,448 Nos trees) shall be provided along the periphery as well in between production and utility blocks which shall also be a good isolation for pesticides, other chemicals and pharmaceutical intermediate plants.

(viii). All applicable statutory requirements for pesticides, other chemicals and pharmaceutical intermediates shall strictly be followed.

(ix). Natural gas/biomass shall be used as a primary fuel and coal as a secondary fuel, only upon non-availability of natural gas/biomass or rainy season.

(x). The company shall comply with all the environmental protection measures and safeguards proposed in the documents submitted to the Ministry. All the recommendations made in the EIA/EMP and other Reports in respect of environmental management, and risk mitigation measures relating to the project shall be implemented.

(xi). The project proponent shall utilize modern technologies for capturing of carbon emitted and shall also develop carbon sink/carbon sequestration resources capable of capturing

more than emitted. The implementation report shall be submitted to the IRO, MoEF&CC in this regard.

(xii). No banned dyes/chemicals/pesticides shall be manufactured by the project proponent. No banned raw materials/chemicals shall be used in the unit. The project proponent shall adhere to the notifications/guidelines of the Government in this regard.

(xiii). The PP shall conduct the life cycle study within six months and the finding of the reports shall be communicated to the MoEFCC/IRO, MoEFCC Gandhinagar and the outcome of the study shall be implemented.

(xiv). The project proponent shall comply with the environment norms for Organic Chemical Industry as notified by the Ministry of Environment, Forest and Climate Change, *vide* GSR 608(E), dated 21.07.2010 under the provisions of the Environment (Protection) Rules, 1986.

(xv). The project proponent shall comply with the environment norms for 'Pesticide Industry' as notified by the Ministry of Environment, Forest and Climate Change, vide GSR 446 (E), dated 13th June 2011 under the provisions of the Environment (Protection) Rules, 1986.

(xvi). Necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents. The Project proponent shall implement the onsite/offsite emergency plan/mock drill etc. and mitigation measures as prescribed under the rules and guidelines issued in the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, and the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996.

(xvii). Continuous online (24x7) monitoring system for stack emissions shall be installed for measurement of flue gas discharge and the pollutants concentration, and the data to be transmitted to the CPCB and SPCB server. For online continuous monitoring of effluent, the unit shall install web camera with night vision capability and flow meters in the channel/drain carrying effluent within the premises.

(xviii). The storage of toxic/hazardous raw material shall be bare minimum with respect to quantity and inventory. Quantity and days of storage shall be submitted to the Integrated Regional Office of Ministry and SPCB along with the compliance report.

(xix). The treated waste water of 393 KLD shall be discharged into NCT for deep sea discharge. Effluent of 8940 KLD quantity shall be treated through ETP+ATFD+ETP+RO+STP.

(xx). Total fresh water requirement shall not exceed 10607.1m^3/day will be met from GIDC, Necessary permission obtained in this regard shall be renewed from time to time.

(xxi). Occupational health centre for surveillance of the worker's health shall be set up. The health data shall be used in deploying the duties of the workers. All workers & employees shall be provided with required safety kits/mask for personal protection.

(xxii). Training shall be imparted to all employees on safety and health aspects of chemicals handling. Safety and visual reality training shall be provided to employees.

(xxiii). The unit shall make the arrangement for protection of possible fire hazards during manufacturing process in material handling. Fire-fighting system shall be as per the norms.

(xxiv). Necessary precautions shall be taken to avoid accidents and action plan shall be implemented for avoiding accidents.

(xxv). Process organic residue and spent carbon, if any, shall be sent to Cement and other suitable industries for its incinerations. ETP sludge, process inorganic & evaporation salt shall be disposed of to the TSDF.

(xxvi). The Solvent management shall be carried out as follows: (a) Reactor shall be connected to chilled brine condenser system. (b) Reactor and solvent handling pump shall have mechanical seals to prevent leakages. (c) Solvents shall be stored in a separate space specified with all safety measures. (d) Proper earthing shall be provided in all the electrical equipment wherever solvent handling is done. (e) Entire plant shall be flame proof. The solvent storage tanks shall be provided with breather valve to prevent losses. (f) All the solvent storage tanks shall be connected with vent condensers with chilled brine circulation.

(xxvii). The Volatile organic compounds (VOCs)/Fugitive emissions shall be controlled at 99.97% with effective chillers/modern technology.

(xxviii). The Storm water from the roof top shall be channelized through pipes to the storage tank constructed for harvesting of rain water in the premises and harvested water shall be used for various industrial processes in the unit. No recharge shall be permitted within the premises. Process effluent/ any wastewater shall not be allowed to mix with storm water.

(xxix). The green belt of at least 5-10 m width shall be developed in nearly 33 % of the total project area, mainly along the plant periphery considering a density of 2500 trees per ha. and 80% survival rate. Selection of plant species shall be as per the CPCB guidelines in consultation with the State Forest Department. Records of tree canopy shall be monitored through remote sensing map. Trees have to be planted with spacing of 2m x 2m and number of trees has to be increased accordingly. The plant species can be selected that will give better carbon sequestration and plantation shall be completed in first year itself.

(xxx). The activities and the action plan proposed by the project proponent to address the socio-economic issues in the study area, shall be completed as per the schedule presented before the Committee and as described in the EIA/EMP report in letter and spirit.

(xxxi). A separate Environmental Management Cell (having qualified person with Environmental Science/Environmental Engineering/specialization in the project area) equipped with full-fledged laboratory facilities shall be set up to carry out the Environmental Management and Monitoring functions.

ANNEXURE-I

GENERAL EC CONDITIONS

- No further expansion or modifications in the plant, other than mentioned in the EIA Notification, 2006 and its amendments, shall be carried out without prior approval of the Ministry of Environment, Forest and Climate Change/SEIAA, as applicable. In case of deviations or alterations in the project proposal from those submitted to this Ministry for clearance, a fresh reference shall be made to the Ministry/SEIAA, as applicable, to assess the adequacy of conditions imposed and to add additional environmental protection measures required, if any.
- The PP shall strictly comply with the rules and guidelines issued under the Manufacture, Storage and Import of Hazardous Chemicals (MSIHC) Rules, 1989, as amended time to time, the Chemical Accidents (Emergency Planning, Preparedness and Response) Rules, 1996, and Hazardous and Other Wastes (Management and Trans-Boundary Movement) Rules, 2016 and other rules notified under various Acts.
- The energy source for lighting purpose shall be preferably LED based, or advanced having preference in energy conservation and environment betterment.
- The overall noise levels in and around the plant area shall be kept well within the standards by providing noise control measures including acoustic hoods, silencers, enclosures etc. on all sources of noise generation. The ambient noise levels shall conform to the standards prescribed under the Environment (Protection) Act, 1986 Rules, 1989 viz. 75 dBA (day time) and 70 dBA (night time).
- The company shall undertake all relevant measures for improving the socio-economic conditions of the surrounding area. The activities shall be undertaken by involving local villages and administration. The company shall undertake eco-developmental measures including community welfare measures in the project area for the overall improvement of the environment.
- The company shall earmark sufficient funds towards capital cost and recurring cost per annum to implement the conditions stipulated by the Ministry of Environment, Forest and Climate Change as well as the State Government along with the implementation schedule for all the conditions stipulated herein. The funds so earmarked for environment management/ pollution control measures shall not be diverted for any other purpose.
- A copy of the clearance letter shall be sent by the PP to concerned Panchayat, ZillaParishad/Municipal Corporation, Urban local Body and the local NGO, if any, from whom suggestions/ representations, if any, were received while processing the proposal.
- The PP shall also upload/submit six monthly reports on Parivesh Portal on the status of compliance of the stipulated Environmental Clearance conditions including results of monitored data to the respective Integrated Regional Office of MoEF&CC, the respective Zonal Office of CPCB and SPCB. A copy of Environmental Clearance and six monthly compliance status report shall be posted on the website of the company.
- The environmental statement for each financial year ending 31st March in Form-V as is mandated shall be submitted to the concerned State Pollution Control Board as prescribed under the Environment (Protection) Rules, 1986, as amended subsequently, shall also be put on the website of the company along with the status of compliance of environmental clearance conditions and shall also be sent to the respective Integrated Regional Office of MoEF&CC by e-mail.

- The PP shall inform the public that the project has been accorded environmental clearance by the Ministry and copies of the clearance letter are available with the SPCB/Committee and may also be seen at Website of the Ministry and at **https://parivesh.nic.in/**. This shall be advertised within seven days from the date of issue of the clearance letter, at least in two local newspapers that are widely circulated in the region of which one shall be in the vernacular language of the locality concerned and a copy of the same shall be forwarded to the concerned Regional Office of the Ministry.
- The project authorities shall inform the Regional Office as well as the Ministry, the date of financial closure and final approval of the project by the concerned authorities and the date of start of the project.
- This Environmental clearance is granted subject to final outcome of Hon'ble Supreme Court of India, Hon'ble High Court, Hon'ble NGT and any other Court of Law, if any, as may be applicable to this project.

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ANNEXURE-II

STANDARD TERMS OF REFERENCE

A. GENERIC TERMS OF REFERENCE

1) **Executive Summary**
2) **Introduction**
   i. Details of the EIA Consultant including NABET accreditation
   ii. Information about the PP
   iii. Importance and benefits of the project

3) **Project Description**
   i. Cost of project and time of completion.
   ii. Products with capacities for the proposed project.
   iii. If expansion project, details of existing products with capacities and whether adequate land is available for expansion, reference of earlier EC if any.
   iv. Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
   v. Details of existing products and production, if any, along with present product/production details in tabular format, to verify the compliance of the EIA Notifications.
   vi. List of raw materials required and their source along with mode of transportation.
   vii. Other chemicals and materials required with quantities and storage capacities
   viii. Details of Emission, effluents, hazardous waste generation and their management.
   ix. Requirement of water, power, with source of supply, status of approval, water balance diagram, man-power requirement (regular and contract)
   x. Details of boiler/gensets (including stacks/exhausts) and fuels to be use
   xi. Details of boiler/gensets (including stacks/exhausts) and fuels to be used
   xii. Process description along with major equipment's and machineries, process flow sheet (quantitative) from raw materials to products to be provided
   xiii. Hazard identification and details of proposed safety systems.
   xiv. Expansion/modernization proposals:
      a. Copy of all the Environmental Clearance(s) including Amendments thereto obtained for the project from MOEF/SEIAA shall be attached as an Annexure. A certified copy of the latest Monitoring Report of the Integrated Regional Office of the Ministry of Environment, Forest and Climate Change as per circular dated 30th May, 2012 on the status of compliance of conditions stipulated in all the existing environmental clearances including Amendments shall be provided. In addition, copy of the latest CTO and status of compliance of Consent to Operate for the ongoing/existing operation of the project from SPCB shall be attached with the EIA-EMP report.
      b. In case the existing project has not obtained environmental clearance, reasons for not taking EC under the provisions of the EIA Notification 1994 and/or EIA Notification 2006 shall be provided. Copies of Consent to

Establish/No Objection Certificate and Consent to Operate (in case of units operating prior to EIA Notification 2006, CTE and CTO of FY 2005-2006) obtained from the SPCB shall be submitted. Further, compliance report to the conditions of consents from the SPCB shall be submitted.

4) Site Details

i. Location of the project site covering village, Taluka/Tehsil, District and State, Justification for selecting the site, whether other sites were considered.
ii. A topo-sheet of the study area of radius of 10km and site location on 1:50,000/1:25,000 scale on an A3/A2 sheet. (including all eco-sensitive areas and environmentally sensitive places)
iii. Details w.r.t. option analysis for selection of site
iv. Co-ordinates (lat-long) of all four corners of the site.
v. Google map-Earth download of the project site.
vi. Layout maps indicating existing unit as well as proposed unit indicating storage area, plant area, greenbelt area, utilities etc. If located within an Industrial area/Estate/Complex, layout of Industrial Area indicating location of unit within the Industrial area/Estate.
vii. Photographs of the proposed and existing (if applicable) plant site. If existing, show photographs of plantation/greenbelt, in particular.
viii. Land-use break-up of total land of the project site (identified and acquired), government/private - agricultural, forest, wasteland, water bodies, settlements, etc shall be included. (not required for industrial area)
ix. A list of major industries with name and type within study area (10km radius) shall be incorporated. Land use details of the study area
x. Geological features and Geo-hydrological status of the study area shall be included.
xi. Details of Drainage of the project up to 5km radius of study area. If the site is within 1 km radius of any major river, peak and lean season river discharge as well as flood occurrence frequency based on peak rainfall data of the past 30 years. Details of Flood Level of the project site and maximum Flood Level of the river shall also be provided. (mega green field projects)
xii. Status of acquisition of land. If acquisition is not complete, stage of the acquisition process and expected time of complete possession of the land. Documents related to conversion of land for Industrial purpose.
xiii. R&R details in respect of land in line with state Government policy

5) <u>Forest, wildlife and CRZ related issues (if applicable):</u>

i. Permission and approval for the use of forest land (forestry clearance), if any, and recommendations of the State Forest Department. (if applicable)
ii. Land-use map based on High resolution satellite imagery of the proposed site delineating the forestland (*in case of projects involving forest land more than 40 ha)*
iii. Status of Application submitted for obtaining the stage I forestry clearance along with latest status shall be submitted.
iv. The projects to be located within 10 km of the National Parks, Sanctuaries, Biosphere Reserves, Migratory Corridors of Wild Animals, the PP shall submit the map duly

authenticated by Chief Wildlife Warden showing these features vis-à-vis the project location and the recommendations or comments of the Chief Wildlife Warden-thereon

v. Wildlife Conservation Plan duly authenticated by the Chief Wildlife Warden of the State Government for conservation of Schedule I fauna, if any exists in the study area
vi. Copy of application submitted for clearance under the Wildlife (Protection) Act, 1972, to the Standing Committee of the National Board for Wildlife
vii. Recommendations and NOC from the concerned State/UT Coastal Zone Management Authority on CRZ angle

6) Environmental Status

i. Determination of atmospheric inversion level at the project site and site-specific micro-meteorological data using temperature, relative humidity, hourly wind speed and direction and rainfall.
   - AAQ data (except monsoon) at 8 locations for PM10, PM2.5, SO2, NOX, CO and other parameters relevant to the project shall be collected. The monitoring stations shall be based CPCB guidelines and take into account the pre-dominant wind direction, population zone and sensitive receptors including reserved forests. Study should indicate minimum, maximum value of different parameters for the period (3 months) collected. Collected data should be supported by the reference data of either CPCB or SPCB. AAQ data & GLC of pollutants from stack emissions should suggest technology/ measures- Best Practiced Technology (BPT) indicating best achieved results.

ii. Raw data of all AAQ measurement for 12 weeks of all stations as per frequency given in the NAQQM Notification of Nov. 2009 along with – min., max., average and 98% values for each of the AAQ parameters from data of all AAQ stations should be provided as an annexure to the EIA Report.
iii. Surface water quality of nearby River (100m upstream and downstream of discharge point) and other surface drains at eight locations as per CPCB/MoEF&CC guidelines.
iv. Whether the site falls near to polluted stretch of river identified by the CPCB/MoEF&CC, if yes give details.
v. Ground water monitoring at minimum at 8 locations shall be included.
vi. Noise levels monitoring at 8 locations within the study area.
vii. Soil Characteristic as per CPCB guidelines.
viii. Traffic study of the area, type of vehicles, frequency of vehicles for transportation of materials, additional traffic due to proposed project, parking arrangement etc.
ix. Detailed description of flora and fauna (terrestrial and aquatic) existing in the study area shall be given with special reference to rare, endemic and endangered species. If Schedule-I fauna are found within the study area, a Wildlife Conservation Plan shall be prepared and furnished.
x. Socio-economic status of the study area.

7) Environment Impact and Environment Management Plan

i. Assessment of ground level concentration of pollutants from the stack emission based on site-specific meteorological features. In case the project is located on a hilly terrain, the AQIP Modelling shall be done using inputs of the specific terrain

characteristics for determining the potential impacts of the project on the AAQ. Cumulative impact of all sources of emissions (including transportation) on the AAQ of the area shall be assessed. Details of the model used and the input data used for modelling shall also be provided. The air quality contours shall be plotted on a location map showing the location of project site, habitation nearby, sensitive receptors, if any.

ii. Water Quality Modelling – in case of discharge in water body
iii. Impact of the transport of the raw materials and end products on the surrounding environment shall be assessed and provided. In this regard, options for transport of raw materials and finished products and wastes (large quantities) by rail or rail-cum road transport or conveyor-cum-rail transport shall be examined.
iv. A note on treatment of wastewater from different plant operations, extent recycled and reused for different purposes shall be included. Complete scheme of effluent treatment. Characteristics of untreated and treated effluent to meet the prescribed standards of discharge under E(P) Rules 1986.
v. Details of stack emission and action plan for control of emissions to meet standards.
vi. Measures for fugitive emission control
vii. Details of hazardous waste generation and their storage, utilization and management. Copies of MOU regarding utilization of solid and hazardous waste in cement plant shall also be included. EMP shall include the concept of waste-minimization, recycle/reuse/recover techniques, Energy conservation, and natural resource conservation.
viii. Proper utilization of fly ash shall be ensured as per Fly Ash Notification, 2009. A detailed plan of action shall be provided.
ix. Action plan for the green belt development plan in 33 % area i.e. land with not less than 1,500 trees per ha. Giving details of species, width of plantation, planning schedule etc. shall be included. The green belt shall be around the project boundary and a scheme for greening of the roads used for the project shall also be incorporated.
x. Action plan for rainwater harvesting measures at plant site shall be submitted to harvest rainwater from the roof tops and storm water drains to recharge the ground water and also to use for the various activities at the project site to conserve fresh water and reduce the water requirement from other sources.
xi. Total capital cost and recurring cost/annum for environmental pollution control measures shall be included.
xii. Action plan for post-project environmental monitoring shall be submitted.
xiii. Onsite and Offsite Disaster (natural and Man-made) Preparedness and Emergency Management Plan including Risk Assessment and damage control. Disaster management plan should be linked with District Disaster Management Plan.

8) Occupational health

i. Plan and fund allocation to ensure the occupational health & safety of all contract and casual workers
ii. Details of exposure specific health status evaluation of worker. If the workers' health is being evaluated by pre designed format, chest x rays, Audiometry, Spirometry, Vision testing (Far & Near vision, colour vision and any other ocular defect) ECG,

during pre-placement and periodical examinations give the details of the same. Details regarding last month analyzed data of above mentioned parameters as per age, sex, duration of exposure and department wise.

iii. Details of existing Occupational & Safety Hazards. What are the exposure levels of hazards and whether they are within Permissible Exposure level (PEL). If these are not within PEL, what measures the company has adopted to keep them within PEL so that health of the workers can be preserved,

iv. Annual report of health status of workers with special reference to Occupational Health and Safety.

9) Corporate Environment Policy

i. Does the company have a well laid down Environment Policy approved by its Board of Directors? If so, it may be detailed in the EIA report.

ii. Does the Environment Policy prescribe for standard operating process / procedures to bring into focus any infringement / deviation / violation of the environmental or forest norms / conditions? If so, it may be detailed in the EIA.

iii. What is the hierarchical system or Administrative order of the company to deal with the environmental issues and for ensuring compliance with the environmental clearance conditions? Details of this system may be given.

iv. Does the company have system of reporting of non-compliances / violations of environmental norms to the Board of Directors of the company and / or shareholders or stakeholders at large? This reporting mechanism shall be detailed in the EIA report

v. Details regarding infrastructure facilities such as sanitation, fuel, restroom etc. to be provided to the labour force during construction as well as to the casual workers including truck drivers during operation phase.

10) Corporate Environmental Responsibility (CER)

i. Adequate funds, as per the Ministry's OM/Guidelines, shall be earmarked towards the Corporate Environmental Responsibility based on Public Hearing issues/socio-economic issues and item-wise details along with time bound action plan shall be included (CER activities shall be related to environment). Socio-economic development activities need to be elaborated upon. For the projects where public hearing is not conducted, CER plan shall be provided based on socio-economic study of the area.

11) Additional studies/Measures to be considered

(i) Provide latest and ecofriendly technology for product manufacturing.
(ii) Emphasize on Green chemistry/Clean Manufacturing
(iii) Provide CAS No. of products along with product list.
(iv) Provide details of amount of carbon sequestered in their unit through greenbelt/other modes, in case of expansion project.
(v) Life structure and sustainability for carbon and water foot print.
(vi) Detailed pollution Load estimation.
(vii) Transportation of Hazardous substance, effluents etc shall be carriedout through

authorized and GPS enable vehicles/Trucks only.

(viii) Category of Hazardous Wastes shall be mentioned in the EIA/EMP report and in presentation.

(ix) Details of greenhouse gases and emissions shall be provided.

(x) Greenbelt shall be developed in the first year of the project and wind breaks shall be erected.

(xi) Study area map shall be overlapped with all the associated features.

(xii) Emphasize on green fuels.

(xiii) The project from NCR shall not use Coal as fuel. Further, PP shall avoid use of Coal in the CPAs and elsewhere also if alternatives are available.

(xiv) Provide the Cost-Benefit analysis with respect to the environment due to the project.

12) Any litigation pending against the project and/or any direction/order passed by any Court of Law against the project, if so, details thereof shall also be included. Has the unit received any notice under the Section 5 of Environment (Protection) Act, 1986 or relevant Sections of Air and Water Acts? If so, details thereof and compliance/ATR to the notice(s) and present status of the case.

13) A tabular chart with index for point wise compliance of above TORs and its details needs to be submitted in the EIA/EMP Report.

B. SPECIFIC TERMS OF REFERENCE FOR EIA STUDIES FOR 5(f) CATEGORY SYNTHETIC ORGANIC CHEMICALS INDUSTRY (DYES & DYE INTERMEDIATES; BULK DRUGS AND INTERMEDIATES EXCLUDING DRUG FORMULATIONS; SYNTHETIC RUBBERS; BASIC ORGANIC CHEMICALS, OTHER SYNTHETIC ORGANIC CHEMICALS AND CHEMICAL INTERMEDIATES)

1. Details on solvents to be used, measures for solvent recovery and for emissions control.
2. Details of process emissions from the proposed unit and its arrangement to control.
3. Ambient air quality data should include VOC, other process-specific pollutants* like NH_3*, chlorine*,HCl*,HBr*,H_2S*,HF*,*etc*.,(*-as applicable)
4. Work zone monitoring arrangements for hazardous chemicals.
5. Detailed effluent treatment scheme including segregation of effluent streams for units adopting ‘Zero’ liquid discharge.
6. Action plan for odour control to be submitted.
7. A copy of the Memorandum of Understanding signed with cement manufacturers indicating clearly that they co-process organic solid/hazardous waste generated.
8. Authorization/Membership for the disposal of liquid effluent in CETP and solid/hazardous waste in TSDF, if any.
9. Action plan for utilization of MEE/dryer’s salts.
10. Material Safety Data Sheet for all the Chemicals are being used/will be used.
11. Authorization/Membership for the disposal of solid/hazardous waste in TSDF.
12. Details of incinerator if to be installed.
13. Risk assessment for storage and handling of hazardous chemicals/solvents. Action plan for handling & safety system to be incorporated.

14. Arrangements for ensuring health and safety of workers engaged in handling of toxic materials.
15. Details of carbon foot prints and carbon sequestration study w.r.t. proposed project needs to spelled out. Proposed mitigation measures also needs to be analysed and submitted for further appraisal of the EAC.

Annexure-III

List of the Expert Appraisal Committee (Industry-3) members participated during Video Conferencing (VC) meeting

S. No.	Name of Member	Designation
1.	**Prof. (Dr.) A.B. Pandit** Vice Chancellor, Institute of Chemical Technology, Mumbai, Sir JC Bose Fellow, Government of India Email: ab.pandit@ictmumbai.edu.in	Chairman
2.	**Prof. (Dr.) S. N. Upadhyay** Research Professor (Hon.), Department of Chemical Engineering & Technology, Indian Institute of Technology (Banaras Hindu University), Varanasi E-mail: snupadhyay.che@iitbhu.ac.in	Member
3.	**Dr. Ashok Kumar Saxena, IFS** Bunglow No. 38, Sector-8A, Gandhinagar, Gujarat – 382008 E-mail: ashoksaxena1159@gmail.com	Member
4.	**Dr. Suresh Panwar** House No.4, Gayateri Green Society, NH 58 Bypass,Kankerkhera, Meerut, Uttar Pradesh Email-spcppri@gmail.com	Member
5.	**Shri Tukaram M Karne** "SHREYAS ORNATE" F-1, 95-Tulasibagwale Colony, Sahakarnagar-2, PUNE: 411 009, Maharashtra E-mail: tmkarne@gmail.com	Member
6.	**Shri Dinabandhu Gouda** Additional Director, DH IPC-I, Room No. 309A, Third Floor, Central Pollution Control Board, Parivesh Bhawan, East Arjun Nagar, Delhi – 110032 E-mail: dinabandhu.cpcb@nic.in	Member
7.	**Shri Sanjay Bisht** Scientist 'E', Room No. 517, Office of the Director General of Meteorology, Indian Meteorological Department, Musam Bhawan, Lodhi Road, New Delhi -110003 E-mail: sanjay.bist@imd.gov.in	Member

8.	**Prof. (Dr.) Suneet Dwivedi,** Professor in K Banerjee Centre of Atmospheric and Ocean Studies, University of Allahabad, Allahabad - 02 Uttar Pradesh E-mail:dwivedisuneet@rediffmail.com /suneetdwivedi@gmail.com	Member
9.	**Dr. M. Ramesh** Scientist 'E' Ministry of Environment, Forest and Climate Change Indira Paryavaran Bhawan, Room No. V-203, Vayu Wing, Jor Bagh Road, New Delhi-110003 Tel. 011-20819338 E-mail: ramesh.motipalli@nic.in	Member Secretary

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MOM approved by

(Prof. Aniruddha B. Pandit)
Chairman

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